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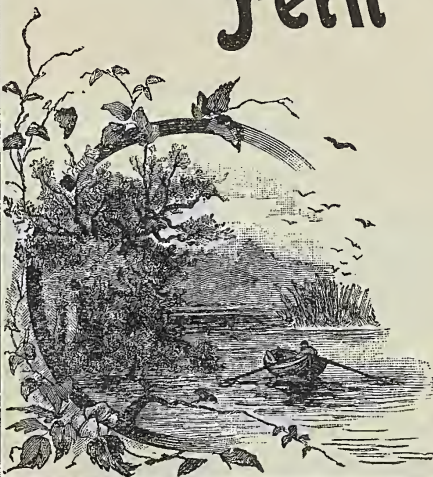
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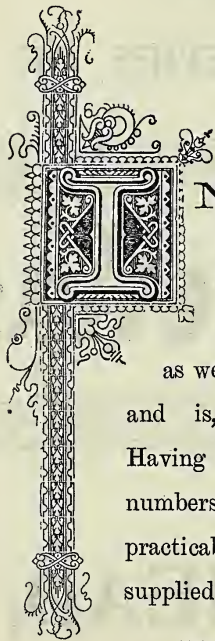
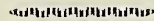


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ADDRESS.



N presenting this CATALOGUE OF STOVE, GREENHOUSE, HARDY EXOTIC, AND BRITISH FERNS AND SELAGINELLAS, we give a cordial invitation to all lovers of Ferns to visit our Nurseries and personally inspect our very extensive Collection, which comprises many new, rare, and beautiful, as well as the more common varieties, of this most interesting class of plants, and is, probably, the largest trade collection of Ferns in the World. Having so large a stock, we are in a position to supply either large or small numbers on the best possible terms; and when a visit to our Nurseries is not practicable, purchasers, upon favouring us with their orders, may rely upon being supplied with good healthy plants, just as if present to select them.

We annually import thousands of Ferns collected in their native habitats, and are constantly adding new and rare varieties to our Collection; if anyone desiring varieties not mentioned in this Catalogue will send their names to us, we shall have pleasure in supplying them if in stock, or procuring them if possible.

We are always pleased to give advice respecting the cultivation of Ferns, but as we receive so many communications on various matters connected therewith, we are obliged to request that questions bearing upon this subject be written on a sheet of paper separate from the letter, with room between each question for our reply. This will save our time, and make the answer intelligible.

Purchasers unacquainted with Ferns, and wishing to have Collections for Stoves, Greenhouses, or Hardy Ferneries, Wardian Cases, &c., should leave the selection to us, and may then rely upon being supplied with varieties suitable for the different places in which they are required to grow. In order that we may select those which are most suitable, we must request our customers to give us an idea of the WINTER temperature in which they will be required to live. A WARM GREENHOUSE is usually understood to be one in which artificial heat is used almost the year round; a COOL GREENHOUSE, one in which

artificial heat is used only in winter, and from which the frost is excluded; a COLD GREENHOUSE, one in which there is no artificial heat, into which the frost is liable to penetrate, and for which the hardier species and varieties must be chosen.

We deem it unnecessary to insert testimonials received by us from those with whom we have done business, but simply say that all orders with which we are favoured shall receive our careful attention as hitherto, our determination being to retain the high reputation we now have for supplying clean, healthy plants; also for the excellence of our packing, by which we secure the safe transit of plants on the longest journeys.

We now do a large foreign trade, sending many cases of Ferns not only to different parts of Europe, but to America, Africa, India, Australia, New Zealand, &c. Our special attention is given to the execution of orders received from customers abroad, to insure the safe arrival of the greatest possible number of plants in each consignment. The many expressions of satisfaction and pleasure we are constantly receiving clearly testify that our care has not been in vain.

We take this opportunity of again thanking all our customers for past favours, which have been highly esteemed. At the same time we solicit further orders, which will be carefully executed as in the past. We also request our customers to kindly recommend our Nurseries to their friends with whom we have not yet had the pleasure of doing business, and who require Ferns.

We shall be pleased to correspond with anyone desirous of collecting and supplying the Ferns growing in the country in which they are residing.

Address for telegrams, "BIRKENHEADS, NURSERYMEN, SALE."

Please see other notes on pages 100 and 101.



March, 1899.

AT THE
GREAT FERN CONFERENCE,

Held in London, July 22nd and 23rd, 1890, we received the **HIGHEST AWARD**
obtainable in this country, viz., the

✦ **GOLD MEDAL** ✦

OF THE
ROYAL HORTICULTURAL SOCIETY,

For our immense and magnificent Collection of Ferns there Exhibited.

This Medal is Awarded only on rare occasions, and as an Exceptional
Mark of Merit.

AT THE
ROYAL HORTICULTURAL SOCIETY'S SHOWS,

Held annually in the **TEMPLE GARDENS, LONDON, 1889 to 1896**, we always received
the **HIGHEST AWARDS**, viz.,

SIX SILVER CUPS,
AND
TWO SILVER GILT MEDALS,

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Thus **EIGHT YEARS IN SUCCESSION** we received this honour at Shows
OPEN TO THE WORLD.

In addition to the above, we have been awarded

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A LARGE SILVER CUP AT MANCHESTER,

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First-class Certificates & Certificates of Merit,

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Hanley, Leicester, and other parts of the Kingdom.

The above **FACTS** serve to confirm the claim that we have

THE FINEST TRADE COLLECTION OF FERNS
IN THE WORLD.

We are desirous of extending our already large business, and one means of
accomplishing this being by pleasing everyone who deals with us, our customers may
place their orders in our hands with the fullest confidence.

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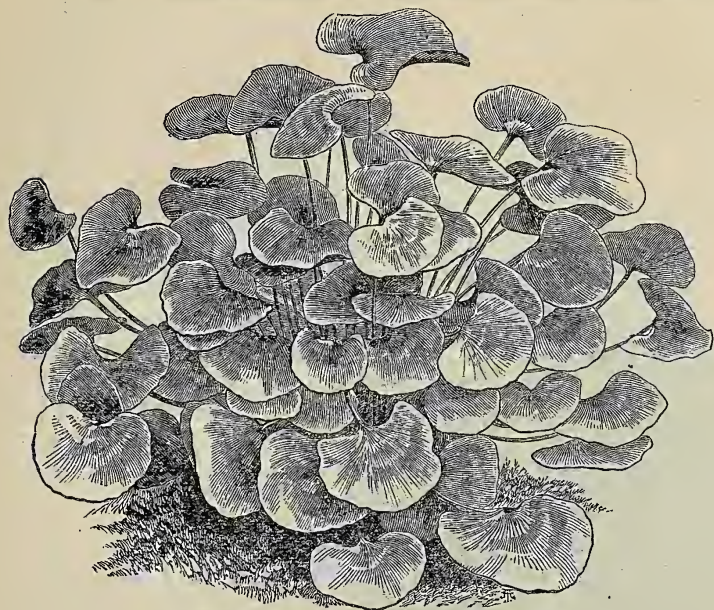
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ADIANTUM RENIFORME.
From "The Book of Choice Ferns." (See page 40.)



BALANTIUM CULCITUM.
From "The Book of Choice Ferns."
(See page 46.)



ADIANTUM FERGUSSONII.
From "The Book of Choice Ferns." (See page 3.)



ADIANTUM MACROPHYLLUM ALBO-STRITUM.
(See page 5.)



AGLAOMORPHA MEYENIANA.

(See page 9.)



ANEMIA ROTUNDIFOLIA.

(See page 9.)



ASPLENIUM ATTENUATUM.
From "The Book of Choice Ferns." (See page 44.)

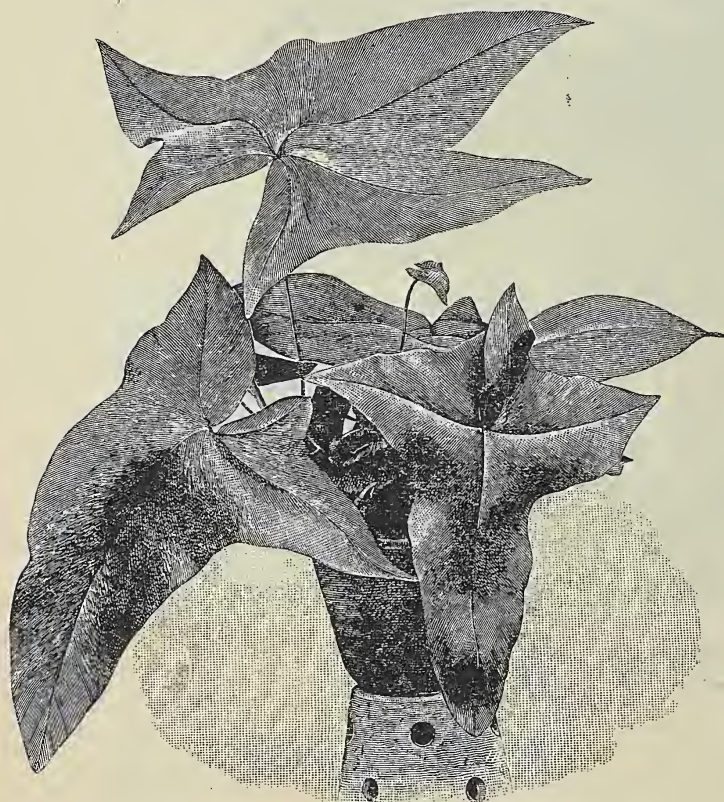


DAVALLIA EPIPHYLLA.

(See page 13.)



PTERIS LONGIFOLIA MARIESII. (See page 69.)



PTERIS LUDENS.
(See page 28.)



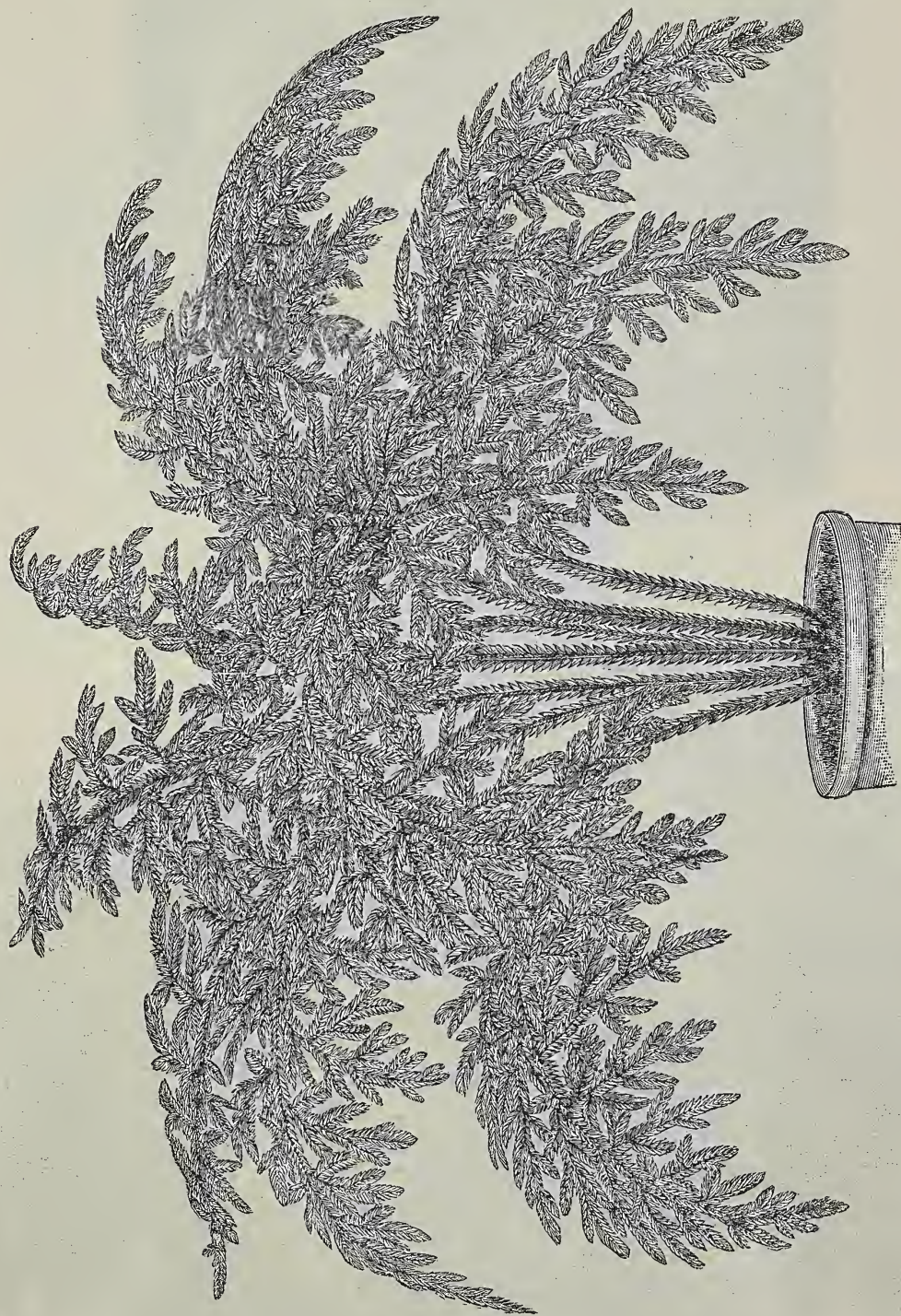
HEMIONITIS CORDATA
From "The Book of Choice Ferns." (See page 56.)



PLATYCERIUM STEMMARIA. (See page 26.)




POLYPODIUM SCHNEIDERII. (See page 67.)



SELAGINELLA USTA.
(See page 33.)

STOVE FERNS.

 THE PRICES AFFIXED TO EACH SPECIES ARE FOR PLANTS OF MEDIUM SIZE; LARGER PLANTS OF MANY CAN BE SUPPLIED AT PRICES PROPORTIONALLY HIGHER, AND SMALLER ONES AT LOWER PRICES. It should be remembered that many Ferns are never large, as they are naturally of small growth.

In some instances there are no prices stated, because at the time of printing this Catalogue we have only Stock plants, or *large* plants, on hand. PRICES OF THE LATTER, WITH PARTICULARS OF SIZE, &C., WE SHALL HAVE PLEASURE IN QUOTING ON APPLICATION, AND THE PRICES OF SMALLER ONES, AS SOON AS WE ARE ABLE TO PROCURE OR PROPAGATE THEM, WILL APPEAR IN OUR ABRIDGED CATALOGUE.

New varieties will be reduced in price as soon as possible.

With so large a number of species and varieties as we now possess, many of them being very difficult to replace when we are once sold out of them, it becomes an impossibility to keep up a supply of *every* variety at *all* times, but we do our utmost to keep our collection as complete as possible; on the other hand, as we are continually propagating and buying in, AT INTERVALS THROUGHOUT THE YEAR, WE ISSUE ABRIDGED CATALOGUES GIVING THE NAMES AND PRICES OF ALL WE ARE AT THAT TIME ABLE TO OFFER. WE SHALL HAVE PLEASURE IN FORWARDING A COPY OF OUR LATEST ISSUE, GRATIS, SHOULD ONE BE DESIRED. It contains many short descriptions and remarks about Ferns, as well as other information not given in this Catalogue.

The names printed in SMALL CAPITALS are those by which the species are usually known, while those printed in *italics* are synonyms.

The Ferns enumerated in this section should be cultivated in a temperature of 60° to 70° in Winter, and 70° to 80° in Summer, though some of them will grow in greenhouse temperature. *Vide* "Hints on Cultivation," at the end of the Catalogue.

Under the heading *Average Height* we give what we believe will prove useful information to many, especially when planting Rockwork, Wardian Cases, &c. It must not be understood, however, that the Ferns never grow any higher than the figures attached to each indicate, nor yet that they always attain the respective heights mentioned, because they grow much more luxuriantly under some circumstances than others; nevertheless, the various heights mentioned will give a fair idea of what may reasonably be expected under ordinary conditions. We would also remark that the figures do not refer to the actual length of the fronds, as some species produce fronds which are pendent, and as these hang down more or less, to give the length of the fronds would convey a wrong idea of their height.

b denotes that the varieties so marked are suitable for Baskets.

c " " " " " Cases.

d " " " " " deciduous.

g " " " " " suitable for Warm Greenhouses.

ACROSTICHUM

	Average Height.						s.	d.
	feet.							
APPENDICULATUM, syn., Egenolfia a.	...	1	...	...	Himalayas	...	...
DRYNARIOIDES	...	3	...	...	Penang	...	3	6
MUSCOSUM	...	2	...	...	Trop. America	...	3	6
OSMUNDACEUM, syn., Polybotrya o.	...	2	...	...	Cuba to Brazil.	...	3	6

ACTINIOPTERIS

RADIATA	Australia.
---------	-----	-----	-----	-----	-----	-----	------------	-----	-----

ADIANTUM

<i>g</i> ÆMULUM	...	...	...	...	1	...	...	...	1	6
<i>bg</i> AMABILE	}	...	...	...	1	...	...	...	1	6
MOOREII		...	...	...	1	...	...	...	1	6

A beautiful Fern, producing graceful, drooping light green fronds, a species specially suitable for growing in baskets or on cork suspended.

ADAINIUM—Continued.

				Average Height.								s.	d.
				feet.									
ANEITENSE (see illustration)	...	...	...	1	$\frac{1}{2}$	...	...	Island of Aneitum	...	3	6		
ASARIFOLIUM	...	...	...	...	$\frac{3}{4}$	...	...	Mauritius	...	...	...
BAUSEII (see illustration)	...	...	...	2	...	...	...	...	...	...	1	6	
<i>cg</i> BELLUM	...	...	...	...	$\frac{1}{2}$	...	...	Bermuda	...	...	1	6	
This is a variety, very dwarf and compact in its habit of growth, forming neat pretty green tufts of slender fronds about six inches high.													
BESSONIANUM	...	...	...	...	1	...	...	...	...	...	...
CARDIOCHLÆNA	{	...	...	...	4	...	...	Trop. America	...	3	6		
<i>polyphyllum</i>		...	...	...	...	...	...	...	...	...	...
<i>b</i> CAUDATUM	{	...	...	...	1	...	...	East Indies	...	...	1	6	
<i>hirsutum</i>		...	...	...	...	...	...	...	...	...	...
COLLISII	...	...	...	...	2	...	...	...	...	...	1	6	



ADIANIUM ANEITENSE.

<i>b</i> CONCIINUM	...	...	...	...	1	...	...	Trop. America	...	1	0
— GRACILE	...	...	...	...	1	...	...	Hort	...	1	0
<i>g</i> — LATUM	...	...	...	...	1	$\frac{1}{2}$	...	...	...	1	0
CRISTATUM	{	...	...	...	...	$\frac{1}{2}$	...	West Indies	...	3	6
<i>denticulatum</i>		...	...	...	...	...	...	...	...	...	...
CULTRATUM	{	...	...	...	...	2	$\frac{1}{2}$	Brazil	...	2	6
<i>pentadactylon</i>		...	...	...	...	...	...	...	...	...	...
CURVATUM	...	...	...	...	...	1	$\frac{1}{2}$	Brazil	...	3	6
CYCLOSORUM	...	...	...	...	...	1	$\frac{1}{4}$	Hort	...	2	6

Average Height.
feet.

PLANTUM—Continued.								Average Height.		s. d.		s. d.	
								feet.					
DOLABRIFORME (see illustration) ... ..								...	...	...	...	1	0
ELEGANTISSIMUM								1	...	...	...	2	6
FARLEYENSE								2	...	...	West Indies	1	6
FASCICULATUM								1	...	...	...	...	...
FEEL } flexuosum }								1	...	...	Mexico	...	...
FERGUSSONII								2	...	...	Ceylon, Colombo	...	1 6
FLABELLULATUM } amœnum } fuscum }								1	...	...	E. Indies	...	2 6



ADIANTUM BAUSEII.

[illegible]

ADIANTUM—Continued.

										Average Height.		s.	d.
										feet.			
LATHAMII	...	...	...	...	...	...	...	...	...	1 $\frac{1}{2}$	...	1	6
A handsome and very graceful variety.													
LINDENII	...	...	...	...	...	...	...	...	...	2	...	...	3 6
bd LUNULATUM	}	...	...	...	...	...	...	...	...	1	...	...	1 6
bd arcuatum		...	...	...	...	...	...	...	...	...	...	...	...



ADIANTUM DOLABRIFORME.

A distinct and handsome species ; the pinnules are alternate, lunulate, of a bright green ; fronds, 12 to 18 inches long. It makes a pretty basket Fern, on account of its pendent habit.

ADIANTUM—Continued.

Average Height.
feet.

MACROPHYLLUM	...	...	...	...	1½	...	Trop. America	...	s. d.	1 6
— ALBO-STRIATUM	...	...	...	...	1½	...	Hort ...	...	...	2 6
— BIPINNATUM	...	...	...	...	2	...	West Indies	...	...	3 6
A very distinct variety, with young fronds beautifully tinted.										
MANUATUM	...	...	...	...	1½	...	...	...	...	2 6
NEO-CALEDONICUM	...	...	...	...	1½	...	New Caledonia	...	...	2 6
g NEO-GUINENSE	...	...	...	...	1	...	New Guinea	...	...	1 0
OBLIQUUM MINUS	...	...	...	...	1	...	U.S. Colombia	...	...	1 6
PARISHII	...	...	...	...	1½	...	Moulmein	...	...	...
PERUVIANUM	...	...	...	...	1½	...	Peru	...	...	3 6



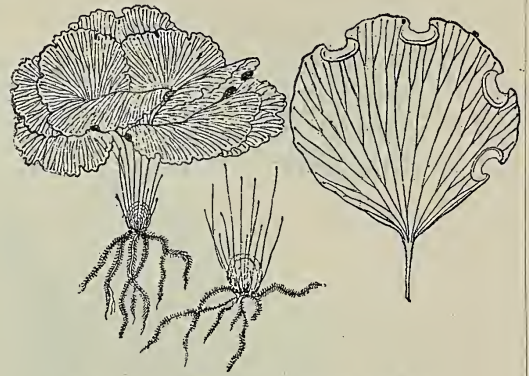
ADIANTUM NEO CALEDONIÆ.

This beautiful Fern was sent out by us in 1885. In the *Gardener's Chronicle*, June 9th, 1883, the late Mr. Thos. Moore says: "This interesting new Maiden-hair Fern was exhibited at the recent Whitsuntide Show of the Royal Manchester and Northern Counties Botanical and Horticultural Society by Messrs. W. & J. Birkenhead, of Sale, and was awarded, as it well deserved to be, a first-class certificate. The species is a very distinct one, differing essentially from all its allies in the attenuated shape of the pinnules. In its general aspect this Fern somewhat reminds one of an *Adiantopsis*, the genus of which *Cheilanthes radiata* is the type, but on closer examination it is seen to be normally tripinnate and not radiate as in this elegant species."

On the 12th of June, the same year, a FIRST-CLASS CERTIFICATE was awarded to it by the Royal Horticultural Society at South Kensington, and a CERTIFICATE OF MERIT at Regent's Park, on the 13th of June, by the Royal Botanic Society.



ADIANTUM FARLEYENSE.



ADIANTUM PARISHII.



ADIANTUM PRINCEPS.

ADIANTUM—Continued.

Average Height.

	feet.			s.	d.
TETRAPHYLLUM GRACILE (see illustration)...	1	...	Colombia	3	6

A handsome Fern of moderate stature, remarkable for the beautiful reddish tint assumed by its fronds when first developed.—*Vide* illustration.

TRAPEZIFORME	...	3	...	W. Indies	1 6
--------------	-----	---	-----	-----------	-----

This is a noble-looking maidenhair Fern, its large branching fronds of light green constituting it one of the most handsome and ornamental of this family.

VELUTINUM	...	2	...	Colombia	3 6
-----------	-----	---	-----	----------	-----

VERSAILLENSIS	...	1	3 6
---------------	-----	---	-----	-----	-----

A pretty variety, much branched and crested.



ADIANTUM TETRAPHYLLUM GRACILE.

VICTORIÆ	...	$\frac{3}{4}$	1 6
----------	-----	---------------	-----	-----	-----

A lovely Fern, of dwarf habit and compact growth, with young fronds prettily tinted.

VILLOSUM	}	...	1½	...	Trop. America	1 6
varium						

WEIGANDII	...	1	1 0
-----------	-----	---	-----	-----	-----

A pretty variety, with crisp undulated pinnules.

WILESIIANUM	...	2	...	Jamaica	...
WILSONII	...	1	...	Jamaica, Brazil	2 6

AGLAOMORPHA, syn., *Polypodium*

Average Height.

	feet.		s.	d.
MEYENIANA	1½	Philippines ...	2	6

From the very peculiar thick, brown, woolly rhizome of this species, it has obtained the name of "The Bear's Paw" Fern. Its dark green deeply-cut fronds are handsome and attractive, the fertile portion of the fronds being much contracted and distinct in appearance.

ANEMIA

ADIANTIFOLIA	1	Trop. America ...		
COLLINA	1	Brazil		
ROTUNDIFOLIA	1	Brazil	7	6
VILLOSA	1	Brazil	2	6
ferruginea }				
flexuosa }				
tomentosa }				

ARTHROPTERIS

ALBO-PUNCTATA, syns., <i>Aspidium a</i> , <i>Nephrodium a</i> ¼	...	Mauritius ...	3	6
c OBLITERATA, syns., <i>Lindsaya Lowei</i> , <i>Nephrodium o.</i> , <i>Neprolepis o.</i> (creeper)	...	Australia ...	3	6

A very rare and distinct species.



ASPLENIUM ALATUM.

ASPIDIUM

CONFLUENS	1	Queensland ...	1	6
DECURRENTS	2	W. Indies, Philippines		
DILACERATUM	1½	Jamaica ...	2	6
PLUMIERII	1½	Martinique ...	1	0
SUBTRIPHYLLUM	1	Polynesia ...	3	6
TRIFOLIATUM, syn., <i>Polypodium t.</i> ...	1½	Trop. America ...	1	0
VARIOLOSUM	1½	India ...	1	6

ASPLENIUM

ABSCISSUM	1	W. Indies ...	1	6
bc ALATUM (see illustration)	1½	Trop. America ...		
APICIDENS	1½	South Sea Islands		
AURITUM	1	Trop. America ...	2	6
AUSTRALASICUM, syn., <i>Neottopteris A.</i> ...	3	Australia ...	2	6

One of the "Bird's Nest" Ferns.

BAPTISTII	1½	South Sea Islands		
BELANGERII }	1½	Java	1	6
VEITCHIANUM }				

ASPIDIUM—Continued.

Average Height.
feet.

s. d.

<i>c</i> BIFIDUM	}	syn., Cœnopteris fabianum	1½ ft.	...	Mauritius	...	...	1	6
<i>lineatum</i>									
<i>lineatum</i> var. <i>bipinnatum</i>									
CICUTARIUM	}	...	...	...	1	...	...	Trop. America...	2 6
<i>dissectum</i>									
CONTIGUUM, var. FISSUM	...	...	...	...	1½	...	...	South Sea Islands	...
ERECTUM	...	...	...	...	1½	...	...	Tropics...	1 6
EROSUM	...	...	...	...	1	...	...	W. Indies	1 6
FORMOSUM	}	...	...	...	1	...	...	Trop. America...	1 6
<i>subulatum</i>									
<i>g</i> FRAGRANS	}	...	...	...	1	...	...	Jamaica...	1 6
<i>Mexicanum</i>									
<i>planicaule</i>									
GODMANII	...	...	...	...	2	...	...	New Granada...	...
<i>c</i> HETEROCARPUM	...	...	...	...	1	...	...	India, Ceylon	...



ASPENIUM AUSTRALASICUM.



ASPENIUM VIVIPARUM.

HETERODON	...	...	...	...	1½	...	...	Java	...	2 6
HORRIDUM	...	...	...	...	3	...	...	Sandwich Islands	...	3 6
<i>c</i> INÆQUALE	}	...	...	...	1½	...	...	Mauritius	...	1 0
<i>inæqualifolia</i>										
LANCEUM	...	...	...	...	¾	...	...	Himalayas	...	1 6
<i>b</i> LONGISSIMUM	}	...	...	...	2	...	...	Madagascar	...	2 6
<i>flagelliferum</i>										

This Asplenium produces long pendent fronds of dark green colour. Its habit and free growth constitute it a capital Basket Fern.

NEO-CALEDONICUM	...	...	...	...	1	...	...	New Caledonia	...	3 6
NIDUS, syn., Neottopteris n.	...	...	...	...	2	...	...	E. Indies	...	2 6

One of the "Bird's Nest" Ferns. It has tall, undivided, bright green fronds.

NOBILIS	1½	1 6
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Fronds finely cut, graceful, and very pretty.

<i>g</i> OBTUSATUM	1	New Zealand	...	2 6
OBTUSIFOLIUM	1	Trop. America
<i>c</i> OBTUSILOBUM	...	...	...	...	½	...	...	Fiji Islands	...	1 0

This is a pretty dwarf, creeping Fern. It throws out a number of runners, which take root, and produce plants which continue the process; it thus spreads quickly over the surface. Having finely-cut fronds, it forms a beautiful object for cases or small baskets.

POLYMORPHUM	1	S. America	...	2 6
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ASPLENIUM—Continued.

				Average Height.						s.	d.
				feet.							
PROLONGATUM...	1	East Indies	2	6
A choice, distinct variety, with narrow, deeply-cut fronds.											
PTERIDOIDES	...	...	...	1	...	...	Lord Howe's Island	...	...	5	0
PTEROPUS	...	...	...	1	...	...	West Indies	...	...	2	6
SERRA	...	...	...	1	...	...	Brazil	...	...	1	6
MAJOR	...	...	...	1½	...	...	Brazil	...	...
SERRA NATALENSIS	...	...	...	...	...	...	Natal	...	...	5	0
VIELLARDII var. FACILE	...	...	...	...	...	...	South Sea Islands	...	...
c VIVIPARUM, syn., Cænopteris v.	...	...	...	1	...	...	Mauritius	...	...	2	6
ZEYLANICUM, syn., Diplazium z.	...	...	...	1¼	...	...	Ceylon	...	...	2	6

BLECHNUM

c GRACILE	...	...	...	1	...	...	Trop. America	...	1	0
c LANCEOLA } trifoliatum	...	...	...	½	...	...	Brazil	...	1	0
LATIFOLIUM } fraxineum	...	...	...	1	...	...	Trop. America	...	1	6



BLECHNUM LANCEOLA.



CHEILANTHES ELEGANS.

CAMPYLONEURUM, syn., Polypodium

ANGUSTIFOLIUM	...	...	...	1	...	...	Trop. America	...	2	6
HENDERSONII	...	...	...	1	...	...	Trop. America	...		
BREVIFOLIUM	...	...	...	2	...	...	Trop. America	...	2	6
PHYLLITIDIS	...	...	...	2	...	...	Trop. America	...	2	6
REPENS, syn., Polypodium r.	...	...	...	1	...	...	Mexico, W. Indies	...	2	6
RIGIDUM } lucidum	syn., Polypodium nitidum			½	Trop. America	...	2	6

CHEILANTHES

g ELEGANS, syn., Myriopteris e.	1½	Trop. America	...	2	6
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This is commonly called "The Lace Fern." It is very beautiful; our illustration gives an idea of its habit of growth. It is not only a good stove Fern, but it grows equally well in greenhouse temperature.

PROFUSA, syns., Pellaea p., Nothoclæna p....	½	S. Africa	...	3	6
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DAVALLIA ALPINA.

A pretty little Fern, with dark green fronds of coriaceous texture. Very suitable for Fern cases as well as for pot culture. It should be in every choice collection.



DAVALLIA HETEROPHYLLA.

A charming species, has rapidly spreading rhizomes, from which spring many bright green fronds, the barren and the fertile being quite distinct. It grows well in baskets or on cork suspended.



DAVALLIA FœNICULACEA.

CHEILANTHES—Continued.

				Average Height. feet.				s.	d.
RADIATA, syns., Adiantopsis r., Adiantum r.,				1	...	...	Trop. America	...	3 6
Hypolepis r.				1	...	...	Trop. America	...	3 6
A rare and very handsome species; the pinnæ all radiate from the top of the stem.									
TENUIS } syn., Myriopteris l., Nothoclœna l.				1	...	...	Trop. America	...	2 6
lindigera }				1	...	...	Trop. America	...	2 6
VISCOSA				1	...	...	Trop. America	...	2 6

DAVALLIA

b ACULEATA, syn., Odontosoria a.				1	...	...	W. Indies	...	3 6
A very rare and beautiful species, having underneath the fronds numbers of sharp thorns.									
c ALPINA, syn., Humata a. (see illustration)				$\frac{1}{6}$	...	...	Borneo	...	1 6
CILIATA, syn., Leucostegia hirsuta				$1\frac{1}{4}$	...	...	Philippine Islands	...	2 6
DECORA				$\frac{3}{4}$	...	...	Java	...	1 0
DECURRENS				$\frac{3}{4}$	...	...	...	...	1 6
b DISSECTA				1	...	...	Java	...	1 0
—— ELEGANS				2	...	...	...	...	1 6
ELATA				2	...	...	Ceylon...	...	2 6
ELEGANS				2	...	...	Ceylon, Java	...	2 6
b ELEGANS POLYDACTYLA				$1\frac{1}{2}$	...	...	...	...	3 6
EPIPHYLLA				$1\frac{1}{2}$	...	...	New South Wales	...	5 0



DAVALLIA FIJIENSIS.

FIJIENSIS (see illustration)				1	...	...	Fiji Islands	...	2 6
—— EFFUSA				$1\frac{1}{2}$	...	...	...	...	5 0
—— ELEGANS				$1\frac{1}{2}$	...	...	Hort.	...	2 6
A very beautiful variety, with finely cut fronds.									
—— MAJOR... ..				$1\frac{1}{4}$	...	...	Fiji	...	2 6
—— ROBUSTA				2	...	...	...	...	5 0
—— PLUMOSA (see illustration)				2	...	...	Fiji	...	5 0

A beautiful variety of graceful habit, with slender stems and gracefully arching fronds.

FENICULACEA (see illustration)				2	...	...	Fiji Islands	...	
GLABELLA				$\frac{3}{4}$	...	...	...	...	2 6
GRIFFITHIANA				$1\frac{1}{2}$	...	...	Assam, China	...	2 6

A very handsome variety, with thick dark green fronds; rhizomes covered by silvery-white scales.

c HETEROPHYLLA, syn., Humata h. (see illustration) $\frac{1}{2}$				...	...	Malayan Archipel.	...	1 6
HIRSUTA ANGUSTATA				$1\frac{1}{4}$	...	Malay Peninsula	...	2 6

DAVALLIA—Continued.

DAVALLIA—Continued.						Average Height.					s.	d.	
						feet.							
	HIRTA	...	...	...	...	2	...	...	E. Indies	...	...	2	6
c	KUNZII	}	...	...	...	1½	...	...	S. Africa	...	...	2	6
	nitidula		...	...	...					
g	LORRAINII	...	...	...	...	1	...	...	Malay Peninsula	...	...	2	6
	MEMBRANULOSA, syn., Leucostegia m.	...	...	...	...	1	...	...	Nepaul	...	...	3	6
	ORNATA	...	...	...	...	2	...	...	Java	...	...	3	6
	PARVULA, syns., Acrophorus p., Leucostegia p.	...	...	...	...	1½	...	...	Malay Archipel.	...	...	2	6
c	PEDATA, syn., Humata p.	...	...	...	...	½	...	...	Malayan Archipel.	...	...	3	6
b	PENTAPHYLLA	}	...	...	...	¾	...	...	Malayan Archipel.	...	...	1	6
	tryphylla		...	...	...					
The young fronds of this species have a peculiar bronzy tint.													
	POLYANTHA	}	...	...	...	2	...	...	Malayan Archipel.	...	...	2	6
	divaricata		...	...	...					



DAVALLIA FIJIENSIS PLUMOSA.
(From "The Book of Choice Ferns.")



DAVALLIA PARVULA.

This exceedingly dwarf species is a lovely little Fern, with finely cut bright green fronds and brown creeping rhizomes. It is very rare, is in few collections, but should be grown by everyone.

PYCNOCARPA	¾	Java	1	6
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A pretty species, with deep glossy green fronds; the young foliage of a bronzy hue.

RETUSA...	...	...	...	...	...	1½	...	...	Sumatra	...	...
SOLIDA	...	...	...	...	...	2	...	...	Malayan Archipel.	...	...	5	0

This splendid Fern, with its large, bright green, graceful foliage, is one of the best for cultivation in baskets, on cork, and in positions where the fronds can hang down and show their beauty.

eg TYERMANNII	¾	China	1	6
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A pretty Davallia, of dwarf compact habit, having rich dark green fronds, springing from a slender rhizome, which is densely covered with silvery white chaffy scales. It grows well also in greenhouse temperature.

The Davallias, excepting several of the smallest species, are all excellent for baskets and for suspended cork blocks. They are also very durable when cut.

DICTYOPTERIS

CAMEROONIANA	}	syn., Polypodium C.	...	3	...	...	Cameroon Mts.	...	3	6
varians										

DIPLAZIUM

				Average Height.							
				feet.						s	d.
GRANDIFOLIUM	...	...	...	3	...	...	Trop. America	...	2	6	
LATIFOLIUM	...	...	...	3	...	...	Ceylon	...	2	6	
PLANTAGINEUM, syn., Asplenium p.	...	...	...	1	...	...	Trop. America	...	1	6	

DORYOPTERIS

DUVALLII	...	...	...	1	...	...	...	...	...	...	...
LUDENS, syn., Pteris	...	...	...	1	...	...	Malayan Peninsula...	3	6		
NOBILIS	...	...	...	1	...	...	Trop. America	...	...	...	...
PALMATA, syns., Litobrochia p., Pteris p.	...	...	...	$\frac{3}{4}$	...	...	Trop. America	...	1	6	
PEDATA, syn., Pteris p.	...	...	...	$\frac{1}{2}$	...	...	Brazil	...	...	...	...

DRYMOGLOSSUM

PILOSELLOIDES, syns., Pteris p. ... $\frac{1}{2}$... E. Indies ... 1 6
 A very rare species, producing small, almost round, thick, fleshy, barren fronds, the fertile fronds being longer and narrow. It is one of the smallest Ferns in cultivation.

SPATHULATUM	$\frac{1}{6}$	1	9
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DRYNARIA

CORONANS, syns., Phlebodium c., Polypodium c. 3 ... E. Indies ... 3 6
 A noble Fern, of large growth; its rhizome is thick, woolly looking and creeping, usually growing in the form of a coronet; hence its specific name.



DRYMOGLOSSUM SSPATHULATUM.

DRYNARIA HERACLEUM—POLYPODIUM HERACLEUM.
From "The Book of Choice Ferns."

DIVERSIFOLIA, syns., Polypodium diversifolium, P. rigidulum	...	...	...	2	...	...	Malaccas, Fiji	...	2	6
HERACLEUM	...	...	...	4	...	...	Java, Philippines	...	...	...
MUSÆFOLIA, syns., Pleopeltis m., Polypodium m., Polypodium microsorum, Acrostichum alatum	...	...	...	2	...	...	Malayan Archipel.	...	2	6

A very ornamental Fern, with bright green simple fronds, which attain a length of 3 or 4 feet, in which the veining is remarkably distinct, like network all over the fronds. It makes a good pot or rockery plant, its long ornamental fronds being strikingly in contrast with the more general style of Fern foliage.

PROPINQUA, syns., Phymatodes p., Polypodium p.	...	...	...	1	...	...	E. Indies	...	2	6
QUERCIFOLIA	...	...	...	2	...	...	India, China, Ceylon.	...	...	...

ELAPHOGLOSSUM, syn., Acrostichum

CONFORME	...	...	...	$\frac{1}{2}$	...	...	Java	...	...	...
HERMINIERII	...	...	...	$\frac{1}{2}$	...	...	Trop. America	...	3	6
LATIFOLIUM	}	...	...	$1\frac{1}{2}$	...	...	Mexico, Brazil	...	3	6
LONGIFOLIUM										
MUSCOSUM	...	...	...	$1\frac{1}{2}$	...	...	Trop. America	...	3	6
RIGIDUM	...	...	...	$\frac{3}{4}$	...	...	Philippines	...	2	6
b VISCOSUM	...	...	...	1	...	...	W. Indies	...	3	6

GONIOPHLEBIUM—Continued.

				Average Height.						s. d.	
				feet.							
GLAUCOPHYLLUM	...	...	...	$\frac{3}{4}$	...	...	W. Indies	...	...	1	6
This beautiful species, not long in cultivation, of small growth, and deep glaucous colour, is well worthy of a place in every collection of Ferns.											
GLAUCOPHYLLUM GLABRUM	...	...	...	$\frac{1}{2}$	...	...	...	...	...	1	6
LORICEUM	...	...	...	1	...	...	...	...	...	2	6
NERIIFOLIUM, syn., Polypodium n.	...	...	...	2	...	...	W. Indies	...	...	3	6
<i>b</i> SUBAURICULATUM, syn., Schellolepis s.	...	...	...	...	...	...	Malayan Archipel.	...	...	2	6
This is one of the best basket Ferns in cultivation, the fronds sometimes attaining a length of 10 feet, hanging down most gracefully.											
VERRUCOSUM, syns., Polypodium v., Schellolepis v.	2ft.	...	Malacca	...	...	...	...	...	...	2	6



GYMNOGRAMMA PERUVIANA ARGYROPHYLLA.

This is probably the best of the Silver Ferns, having not only an abundance of white farina or powder underneath, but also a thinner covering on the upper surface and the stems of every frond.



GYMNOGRAMMA SCHIZOPHYLLA GLORIOSA.

A most beautiful variety, with long, graceful, drooping fronds, cut into exceedingly narrow segments. It makes a handsome specimen.

GONIOPTERIS

REPTANS, syns., Polypodium r., P. compositum	$\frac{1}{2}$	...	...	Jamaica	...	...	1	0
VIVIPARA } <i>fraxinifolia</i>	syns., Polypodium v., P. proliferum		$1\frac{1}{2}$ ft.	Brazil	...	...	1	6

GYMNOGRAMMA

ALSTONII, <i>Gold Fern</i>	...	...	2	...	...	...	...	1	6
CALOMELANOS, <i>Silver Fern</i>	...	...	$2\frac{1}{2}$	...	...	Trop. America	...	1	0
CANTONENSIS	...	...	$\frac{1}{4}$	...	...	Canton	...	2	6
CHEROPHYLLA (<i>an Annual Fern</i>)	...	...	$\frac{3}{4}$	...	...	Cuba	...	2	6
CHRYSOPHYLLA, <i>Gold Fern</i>	...	...	2	...	...	W. Indies	...	2	6
————— GRANDICEPS, <i>crested Gold Fern</i>	...	...	$\frac{3}{4}$	...	...	...	...	2	6
A fine crested variety, making a charming specimen. Very distinct and desirable.									
————— SUPERBA	...	...	1	...	...	...	...	3	6
————— LAUCHEANA, <i>Gold Fern</i>	...	...	$1\frac{1}{2}$	...	...	...	...	1	6
CHRYSOPHYLLA MULTICEPS	...	...	1	...	...	...	...	...	...
DECOMPOSITA, <i>Gold Fern</i>	...	...	$2\frac{1}{2}$	...	...	...	...	1	6
————— ROBUSTA	...	...	3	...	...	...	...	3	6

A handsome variety, with graceful fronds, heavily powdered, very robust.

GYMNOGRAMMA—Continued.

Average Height.
feet.

								s.	d.
DOBROYDENSE, <i>Gold Fern</i>	...	...	...	1½	...	...	...	1	6
FLAVESCENS	...	...	...	1	...	...	...
MARTENSII, <i>Gold Fern</i>	...	...	...	1½	...	...	...	1	6
———— GRANDICEPS	...	...	...	1	...	...	...	2	6
MUELLERII	...	...	...	1	...	N.E. Australia	...	5	0
A very distinct and choice species, awarded F.C.C. by R.H. Socy.									
PARSONSII, <i>crested Gold Fern</i>	...	...	...	1	...	...	...



GYMNOPTERIS QUERCIFOLIA.



HEMIONITIS PALMATA.



HYMENODIUM CRINITUM.

From "The Book of Choice Ferns."



LOPHOLEPIS PILOSELLOIDES.

From "The Book of Choice Ferns."

PEARCEII 1
 The foliage of this species is cut into exceedingly fine segments.

———— ROBUSTA 1½
 This is a stronger grower than the preceding; both are very pretty.

PERUVIANA ARGYROPHYLLA, <i>Silver Fern</i>	...	1½	...	Trop. America	...	1	0
PULCHELLA, <i>Sulphur Fern</i>	...	1½	...	Venezuela	...		
RUFA	...	1½	...	West Indies	...	1	6

GYMNOGRAMMA—Continued.

Average Height.
feet.

SCHIZOPHYLLA	...	...	...	...	...	Jamaica	...	...	s. d. 2 6
GLORIOSA	...	...	...	...	1½	...	...	...	2 6
SUPERBA	...	...	...	...	1½	...	...	...	3 6

An exceedingly handsome variety, a strong grower, fronds finely cut, deep green and abundant. A fine basket Fern. New.

TARTAREA, <i>Silver Fern</i>	...	...	...	...	1½	...	Trop. America	...	1 6
TOMENTOSA	...	...	...	...	1½	...	Trop. America	...	1 6
TRIFOLIATA	...	...	...	...	3	...	Trop. America	...	3 6
WETTENHALLIANA, <i>crested Sulphur Fern</i>	...	...	...	...	1	...	...	...	2 6

GPMNOPTERIS, syn., *Acrostichum*

ALIENA...	...	...	...	...	1	...	Trop. America	...	2 6
c QUERCIFOLIA neitnerii	}		syns., <i>Acrostichum</i> q.		Polypodium q. ½ ft.		Ceylon ..	...	2 6

HYMENODIUM, syns., *Acrostichum*, *Dictyoglossum*

CRINITUM (The Elephant's Ear Fern)	...	1½	W. Indies
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LEUCOSTEGIA AFFINIS.



MENISCIUM SIMPLEX.

HYPODERIS

BROWNII	1	...	Trinidad	...	2 6
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LEPTOCHILUS, syn., *Acrostichum*

DECURRENS, syn., <i>Gymnopteris</i> d.	1	...	Ceylon...	...	1 6
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LEUCOSTEGIA, syn., *Davallia*

AFFINIS (see illustration)	1	...	Ceylon...	...	3 6
d CHÆROPHYLLA	1½	...	E. Indies	...	2 6
c HIRSUTA, syns., <i>Davallia ciliata</i> , <i>Microlepia</i> h	...	...	...	...	1	...	Luzon ...	...	2 6
ANGUSTATA	1½	...	Malay Peninsula	...	2 6
d PULCHRA	1	...	Nepal	2 6

LONCHITIS

PUBESCENS	3	...	Mauritius	...	3 6
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LOPHOLEPISAverage Height.
feet.

s. d.

c PILOSELLOIDES, syns., Goniophlebium p.,	W. Indies	2	6
Polypodium p. f...	1½					

LYGODICTYON (*Climbing Fern*)

FORSTERII	E. Trop. Australia	...			
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LYGODIUM (*Climbing Ferns*)

CIRCINATUM	}	E. Indies	3	6
DICHOTOMUM						
flexuosum												

The largest Climbing Fern in cultivation. Very handsome.

HIRSUTUM	}	...	...	...	...	1	...	W. Indies, Brazil	...			
VENUSTUM		...	...	...	...	...	...
VOLUBILE		...	...	...	...	...	...	Cuba, Brazil	...	...	3	6

These beautiful climbers should be in every collection of Stove Ferns.

**NEPHROLEPIS DAVALLIOIDES FURCANS.****MENISCIUM**

OLIGOPHYLLUM	2	6
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A large species, with bold, ornamental foliage.

SERRATUM	1½	Mexico, West Indies				
c SIMPLEX (see illustration)	...	...	...	...	1	...	...	Hong Kong	...	...	2	6

MICROSORUM

IRIOIDES	}	syns., Pleopeltis i., P. microsoria,										
irregulare		Polypodium i....	...	3	...	...	...	E. Indies	...	...	2	6

NEPHROLEPIS

										Average Height.		s.	d.
										feet.			
ALBO-PUNCTATA	...	...	...	...	...	2	...	...	...	...	...	1	6
BAUSEII	...	...	...	...	...	1½	...	...	...	...	...	1	6
A very distinct and pretty variety.													
CORDIFOLIA } TUBEROSA }	syn., Aspidium t.		...	...	...	2½	...	Central America, E. Indies...	...	...	...	1	6
CORDIFOLIA COMPACTA	...	...	...	...	...	1½	...	...	...	...	...	1	6
b DAVALLIODES, syn., Aspidium d.	...	...	...	...	...	3	...	Malayan Archipel.	...	...	...	2	6
b ————— FURCANS (see illustration)	...	...	...	...	...	...	...	...	...	...	...	3	6

A beautiful and distinct crested variety of *N. davalliodes*. It is of robust growth, sending forth numerous arching fronds from 3 to 4 feet long. It makes a handsome specimen.—*Vide* illustration.



NEPHROLEPIS DUFFII.

b ————— MULTICEPS	...	...	...	1½	...	...	...	...	...	...	3	6
b ————— PLUMOSA	...	...	...	2	...	...	...	...	...	...	2	6
b DUFFII (see illustration)	...	...	...	...	...	...	...	Duke of York Island.	...	...	1	6

A very distinct and remarkable fern, of a close tufted habit of growth, producing numerous fronds of a very peculiar character, and exceedingly ornamental. They attain a height of about 2 feet.—*Vide* illustration.

ACUTA } ENSIFOLIA }	3	Trop. America.	...	2	6
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A splendid variety, with large gracefully-drooping fronds.



NEPHROLEPIS RUFESCENS TRIPINNATIFIDA.



NIPHOBOLUS HETERACTIS.



NIPHOPSIS ANGUSTATUS.

NEPHROLEPIS—Continued.

				Average Height.							
				feet						s.	d.
EXALTATA, syns.,	Aspidium e.,	Nephrodium e.		3	...	...	Trop. America.	...	1	6	
—————	BARTERII	...	...	1½	...	...	...	...	...	...	...
b	PECTINATA, syn.,	Aspidium p.	...	1½	...	...	Trop. America.	...	1	6	
	PHILIPPINENSE	...	...	1½	...	...	Philippine Islands	...	1	6	
g	PLUMA...	...	...	2	...	...	...	...	...	1	0
	RUFESCENS TRIPINNATIFIDA...	...	...	2½	...	...	Fiji	...	...	2	6
	UNDULATA	...	...	1½	...	...	...	...	...	1	6
	ZOLLINGERIANA	...	...	3	...	...	...	...	...	1	0

NIPHOBOLUS, syn., *Polypodium*

HETERACTIS (see illustration)	1½	...	Himalayas	...	2	6
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An interesting species, with simple fronds, the under surface and stems being covered with woolly scales.

NIPHOPSIS, syn., *Polypodium*

ANGUSTATUS, syns.,	Niphobolus a.,	N. macrocarpus,	N. sphærocephalus,	Pleopetis a.,				
Polypodium a. (see illustration)	...	1	...	Malayan Archipel.	...	2	6	



ONYCHIUM AURATUM.

NOTHOCLÆNA

g	CHRYSOPHYLLA	} syn., Cincinalis c.	...	1	...	Trop. America	...	1	0
	flavens								

A golden Fern, in appearance so like an Adiantum as to cause many to speak of it as a golden maidenhair. It will grow either in the stove or greenhouse.

g	ECKLONIANA	} ...	...	1	...	South Africa	...	3	6
	pumila								

A rare species, with woolly fronds.

g	NIVEA	} syns., Cincinalis n.	...	3	...	Trop. America	...	1	6
	incana								

A pretty little Silver Fern.

NOTHOCLÆNA—Continued.

Average Height.
feet.

									s.	d.
<i>g</i> RUFA	}	syn., Cheilanthes f.	...	...	1½	...	...	Trop. America	...	2 6
<i>ferruginea</i>			...	...	1½	...	...	Mexico	...	2 6
<i>g</i> SINUATA, syn., Acrostichum s.			...	...	1½	...	...		...	2 6
A lovely species, rare in cultivation, but easy to manage either in a warm or cold house. It produces long narrow fronds, the under surface being closely covered with silvery scales, causing it to look almost like a Silver Fern.										
TRICHOMANOIDES, syn., Pteris t.			...	...	¾	...	...	Jamaica	...	5 0



PHLEBODIUM VENOSUM



PLATYCERIUM BIFORME.



POLYPODIUM VACCINIIFOLIUM.

OLEANDRA

<i>g</i> ARTICULATA	...	...	...	...	1	...	...	S. Africa	...	2 6
NERIIFORMIS	...	...	...	...	1	...	...	Tropics	...	...
<i>bg</i> NODOSA, syn., Aspidium n.	1	W. Indies	...	2 6

OLFERSIA, syn., Acrostichum

CERVINA	2	Cuba, Mexico...
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ONYCHIUM

AURATUM	1½	Himalayas	...	3 6
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A very beautiful species, with finely-cut fronds.

PHEGOPTERIS, syn., Polypodium

<i>b</i> EFFUSUS, syn., Polypodium e.	...	...	...	...	3	...	...	W. Indies	...	1 6
SANCTA, syns., Lastrea s., Polypodium s.	...	...	...	...	1	...	...	W. Indies	...	...



PLATYCERIUM GRANDE.

PHLEBODIUM

				Average Height.							
				feet.						s.	d.
AUREUM, syn.,	Polypodium a.	...	...	3	...	...	Trop. America	...	1	0	
GLAUCUM	{ syn., Polypodium g. }	...	...	3	...	...	Philippines	...	1	6	
SPORODOCARPUM		" "	s.								
c VENOSUM, syns.,	Polypodium v., Anapeltis stigmatica,	Polypodium s., Pleopeltis s. (see illustration)	...	1½	...	...	Trop. America	...	2	6	

The foliage of this is most beautifully veined.

PHYMATODES

LONGISSIMA, syn.,	Polypodium l.	...	...	3	...	...	India	...	2	6	
NIGRESCENS, syns.,	Polypodium n., Polypodium saccatum	5ft...	...				India, Fiji	...	2	6	
VULGARIS, syns.,	Pleopeltis phymatodes, Polypodium p.	1½ ft.	...				Ceylon	...	2	6	
— cristata	...	...	...	1½	...	...	...	...	1	6	



PLATYCERIUM WALLICHII.

PLATYCERIUM, syn., Acrostichum

BIFORME	...	...	...	1½	...	...	Malay Peninsula	...			
GRANDE (see illustration)	...	...	...	1½	...	...	Malayan Archipel. and Australia	...	10	6	
HILLII...	...	...	...	...	...	...	Australia	...	7	6	
Aethiopicum }	...	...	...	1½	...	...	W. Africa	...	3	6	
STEMMARIA }											
These succeed best when planted on blocks of wood, or pieces of cork suspended.											
WALLICHII	...	...	...	1½	...	...	Malay Peninsula	...			
WILLINCKII	...	...	...	1½	...	...	Java	...	10	6	

PLEOCNEMIA, syn., *Nephrodium*Average Height.
feet.

LEUZEANA, syn., <i>Polypodium</i> L. (see illustration)	5ft.	...	Philippine Islands	...	s. d. 2 6
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PLEOPELTIS

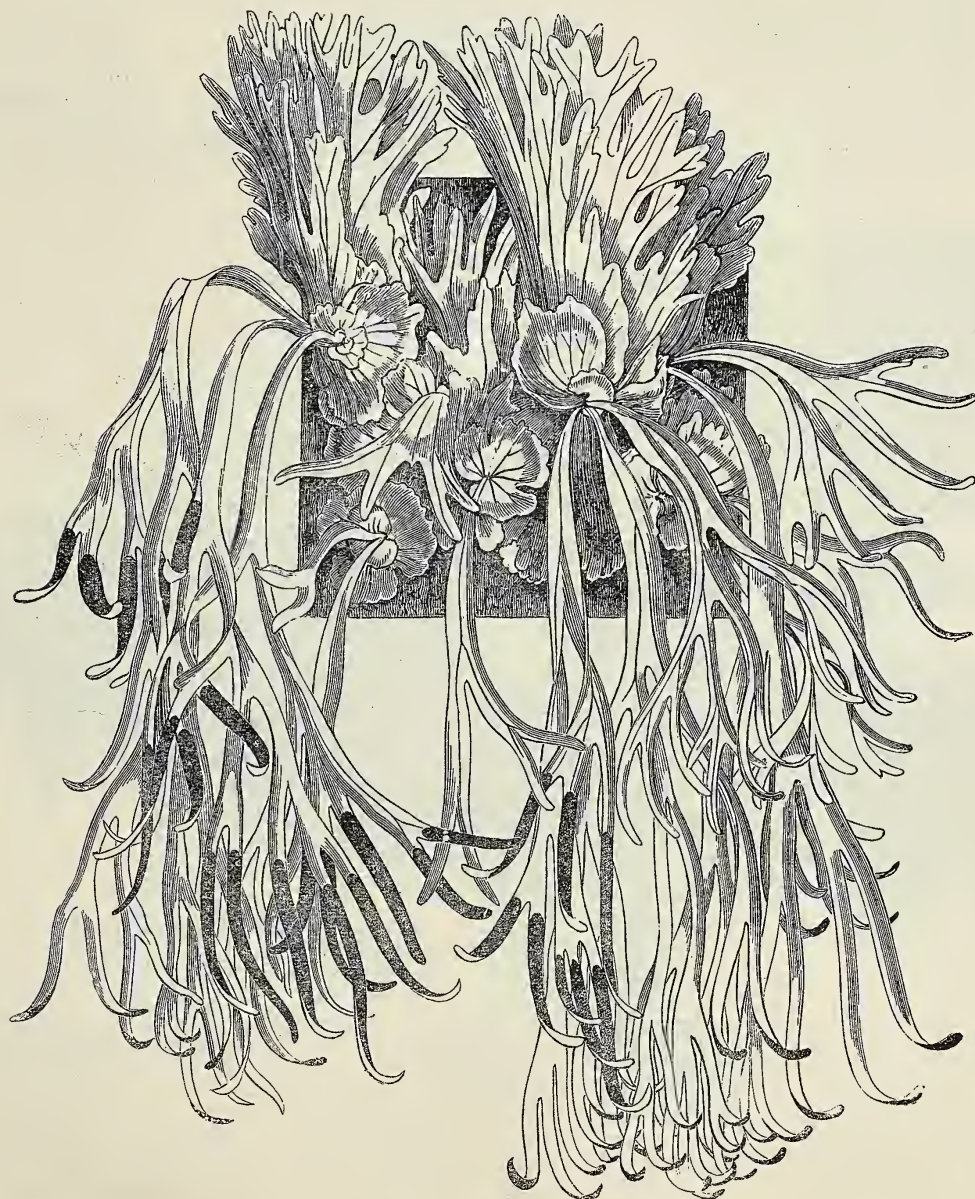
FOSSA	1	Eastern Archip.	...
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An attractive, curious-looking Fern, the fronds of which are deeply cut into narrow segments.

bg JUGLANDIFOLIA. syns., *Polypodium* J.,

P. capitellatum, *P. Wallichianum*,

<i>Pleuridium</i> J.	1	Trop. America	...	1 6
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PLATYCERIUM WILLINCKII.

PLEOPELTIS—Continued.

PICTA	1	S. S. Islands	...	1 6
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An interesting species, very desirable.

XIPHIAS	1	S. Pacific Islands	...	2 6
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A very distinct species, the fronds paddle-shaped, light green, and conspicuously veined.

PLEURIDIUM, syn., *Polypodium*

Average Height.

					feet.					s.	d.
CRASSIFOLIUM...	...	...	...	...	2	...	...	Trop. America	...	2	6
CRASSINERVITUM	...	...	...	...	2	...	...	Java	...	2	6

POLYPODIUM

AREOLATUM	...	...	...	...	2	...	...	...	...	1	6
CATHERINÆ	syn.,	Goniophlebium	C.	...	2	...	...	Brazil	...	1	6
HERACLEUM	...	...	...	...	3	...	...	Java	...	...	...
LEIORHIZON	syns.,	Phymatodes	l.,	Pleopeltis	l.	3	...	W. Indies	...	2	6
PECTINATUM	...	...	...	...	2	...	...	Trop. America	...	1	6
PLUMOSUM	}	<i>plumula</i> <i>Schkuhrrii</i>	}	...	1	...	...	Brazil	...	3	6
TERMINALE				...	1½	...	...	...	...	2	6
VACCINIIFOLIUM	...	...	...	...	1½	...	...	Jamaica	...	1	6
VARIUS	...	...	...	...	½	...	...	W. Indies	...	1	6



PLEOCNEMIA LEUZIANA.

PTERIS

ASPERICAULIS	...	...	...	...	1½	...	...	E. Indies	...	1	6
GHIESBREGHTII	}	syn.,	Lonchitis	G.	...	3	...	Mexico, W. Indies	...	2	6
laciniata					...	...	...	...	...	...	...
BIAURITA ARGENTEA	...	...	...	...	2	...	...	...	...	3	6
LUDENS	...	...	...	...	1½	...	...	Malayan Peninsula	...	3	6
PUNGENS	...	...	...	...	3	...	...	W. Indies	...	2	6

PTERIS—Continued.

PTERIS—Continued.				Average Height.						s.	d.	
				feet.								
<i>g</i>	TRICOLOR (see illustration)	...	...	1½	...	...	E. Indies	...	...	2	6
	VICTORIÆ	...	...	1	...	...	...	...	...	2	6

A beautiful, variegated variety, sent out 1891.

RHIPIDOPTERIS

<i>eg</i>	PELTATA, syns., <i>Acrostichum p.</i> , <i>A. fœniculaceum</i>	¼ ft.	...	W. Indies	...	...	2	6
	GRACILLIMA	...	...	...	...	...	2	6

SAGENIA

CICUTARIA	...	...	...	1½	...	Trop. America	...	1	0
IRREGULARE	}	...	...	2	...	Polynesian Islands	...	5	0
LATIFOLIUM									

SALPICHLÆNA

SCANDENS	}	syn., <i>Blechnum volubilis</i>	Trop. America	...	2	6
VOLUBILIS									



RHIPIDOPTERIS PELTATA.

SELLIGUEA, syn., *Gymnogramma*

CAUDIFORME	...	...	...	1½	...	Java	...	...	1	6
POTHIFOLIA	}	2	...	India, Java	1	6
decurrens										

STENOCHLÆNA

<i>b</i>	SCANDENS, syn., <i>Acrostichum s.</i>	2	...	E. Indies	2	6
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A free-growing species, with gracefully-arching fronds. For Rockwork or Baskets it is a fine variety.

STENOSEMIA

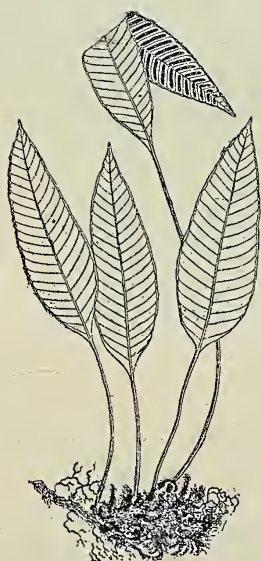
AURITA, syns., <i>Acrostichum a.</i> , <i>Polybotrya a.</i>	1	Philippine Islands	...	1	6
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THYRSOPTERIS

ELEGANS	Juan Fernandez	...
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POLYPODIUM NIGRESCENS.



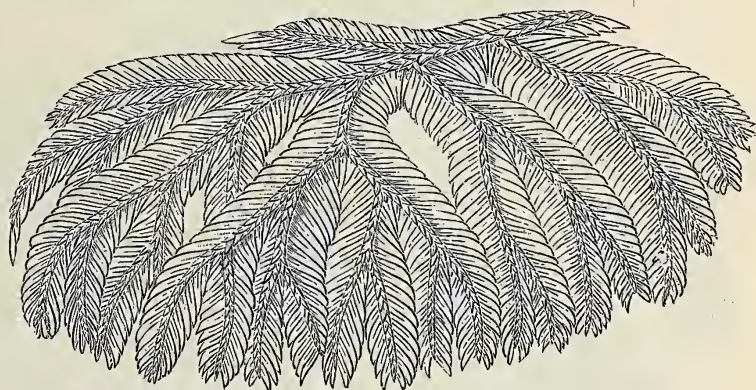
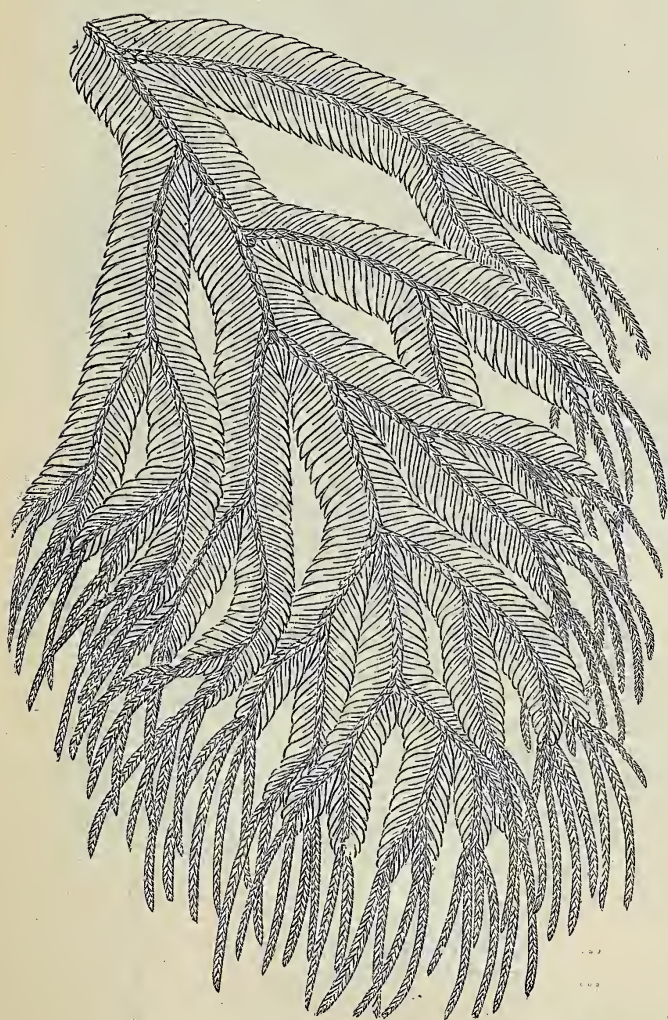
SELLIGUEA CAUDIFORME.



PTERIS TRICOLOR.

SELAGINELLAS.

				Average Height.							
				feet.				s.	d.		
ALBA SPICATA	...	...	...	$\frac{1}{4}$	...	...	...	...	...	...	...
AMENA	...	...	...	1	...	...	Mexico	...	1	6	
AFRICANA, syn., Vogelli	...	...	...	1	...	...	Fernando Po	...	1	6	
c ATROVIRIDES	...	...	...	1	...	...	E. Indies	...	1	0	
BAKERIANA	...	...	...	$\frac{1}{6}$	...	...	Queensland	...	0	6	
CANALICULATA	...	...	...	...	...	...	S. Pacific Islands	...	...	...
A handsome species of Club Moss of scandent habit, introduced 1883.											
c CAULESCENS	...	...	...	1	...	...	E. Indies	...	1	0	
— ARGENTEA	...	...	...	1	...	...	Colombia	...	1	0	
c — MINUS, syn., Japonica...	...	...	...	$\frac{1}{2}$	...	...	E. Indies	...	1	6	



SELAGINELLA GRANDIS.

c CAESIA	}	...	...	...	...	...	China	...	...	0	6
UNCINATA											
A pretty trailing variety, blue-green in colour.											
CAESIA ARBOREA	}	(a Climbing Moss)	...	...	...	...	E. Indies	...	...	1	6
WILDENOVII											
<i>altissima</i>											
LEVIGATA											

A most beautiful species. Its large branches are of a lovely metallic blue ; to produce the deepest colour it should be well shaded.

SELAGINELLAS—Continued.

Average Height,
feet.

s. d.

COGNATA	}	...	...	...	...	1	...	...	Borneo...	...	...	1	6
LOBBII	}	...	...	...	...		...	...		...	...
CONCINNA	...	...	...	...	...	$\frac{1}{6}$	...	...	Mauritius	...	...	1	6
DENSA ELEGANS	...	...	...	...	...	$\frac{1}{6}$	...	...	...	...	...	0	6
DICHROUS	}	...	...	...	...	1	...	...	Colombia, Peru	...	...	1	6
FILICINA	}	...	...	...	...		...	...		...	...
EMILIANA	...	...	...	...	...	$\frac{1}{2}$	...	...	...	...	...	1	0

A pretty "Bird's Nest" Moss.



SELAGINELLA PERELEGANS.

c ERYTHROPUS	...	...	...	...	...	$1\frac{1}{2}$	...	...	Trop. America	...	1	6
MINUS	...	...	...	...	...	$\frac{1}{4}$	...	...	...	...	...	...
FLABELLATA	...	...	...	...	...	1	...	...	Trop. America	...	1	6
FLAGELLIFERA	...	...	...	...	...	1	...	...	Fiji	...	1	0
GALEOTTII	}	...	...	...	...	$\frac{1}{2}$	...	...	Mexico...	...	1	0
SCHOTII	}	...	...	...	...		...	...		...	...
GRACILIS	...	...	...	...	...	1	...	...	S. Sea Islands	...	1	6
GRANDIS	...	...	...	...	...	1	...	...	Borneo	...	1	6

A most beautiful and distinct species, bold but not ungraceful in habit, of grass-green colour. The illustration conveys a good idea of the appearance of the plant when full grown. It should be in every collection, and if kept under a glass shade will be specially beautiful.

SELAGINELLAS—Continued.

Average Height.
feet.

										s.	d.
HÆMATODES	...	...	...	...	1	...	...	...	...	1	6
INÆQUALIFOLIA	...	...	...	...	1½	...	...	Java	...	1	0
LEPIDOPHYLLA	...	...	...	...	¼	...	...	Mexico	...	...	...
LYALLII	...	...	...	...	1	...	...	Madagascar	...	2	6
<i>g</i> PATULA	}	...	...	...	½	...	...	W. Indies	...	1	0
SARMENTOSA		...	...	...	...	...	...	...	...	...	...
<i>c</i> PERELEGANS	...	...	...	...	1½	...	...	Ceylon...	...	1	0

An ornamental Club Moss, allied to *S. inæqualifolia*, but dwarfer and denser, having pinkish red stems and dull green foliage. (*Vide illustration.*)



SELAGINELLA TASSELLATA.

MOLLICEPS	...	...	...	...	½	...	...	W. Africa	...	1	0
PERVILLEI	...	...	...	...	1	...	...	...	...	1	0
PILIFERA	...	...	...	...	¼	...	...	Texas	...	...	...
RUBELLA	...	...	...	...	½	...	...	...	...	1	0
— VARIEGATA	...	...	...	...	½	...	...	...	...	1	0
<i>c</i> RUBRICAULIS	...	...	...	...	½	...	...	...	...	1	0
SETOSA	...	...	...	...	⅓	...	...	Trop. America	...	1	0
SUBEROSA	...	...	...	...	½	...	...	...	...	1	0
TASSELLATA	...	...	...	...	¾	...	...	Brazil	...	3	6
<i>c</i> TRIANGULARIS	...	...	...	...	1	...	...	...	...	1	6
USTA	...	...	...	...	1	...	...	New Caledonia	...	3	6

SELAGINELLAS—Continued.

				Average Height.						s.	d.
				feet.							
c	VICTORIÆ (see illustration)	...	...	1	...	...	Borneo	...	...	1	6
	VIRIDANGULA	...	...	2	...	...	Fiji	...	...	1	6
c	VITICULOSA	...	...	$\frac{1}{2}$	...	...	Colombia	...	...	1	0
	VOGELII	}	...	1	...	...	Madagascar	...	...	1	6
	AFRICANA		...	1	...	...	Penang	...	...	1	6
	WALLICHII	...	...	$1\frac{1}{2}$	...	...	Trop. America	...	...	1	6
	WARSCIEWICZII	...	...	1	...	...			



SELAGINELLA VICTORIÆ.

GREENHOUSE FERNS.

See remarks at the beginning of Stove Plants.

The varieties enumerated in this section should have a temperature of from 40° to 60° in Winter, and 60° to 75° or 80° in Summer. Some of them will grow well in the temperature stated for Stove Ferns.

ACROSTICHUM

										Average Height.			
										feet.		s.	d.
AUREUM	...	...	...	...	...	...	...	...	...	3	...	N. America	...
SQUAMOSUM	...	...	...	...	...	...	...	...	...	1	...	Madeira	...

ADIANTUM

<i>b c</i> ÆTHIOPICUM	}	...	...	...	...	...	...	...	...	...	...	Tropics	...	...	1	6
<i>venustum</i> of many nurseries		...	...	...	...	...	...	...	...	$\frac{3}{4}$	...	S. Africa	...	...
— AUREUM		...	...	...	...	...	...	...	...	2	...	N. Zealand	...	...	1	6
<i>c</i> AFFINE	}	...	...	...	...	...	...	...	...	1	...	Australia	...	...	1	0
<i>Cunninghamii</i>		...	...	...	...	...	...	...	...	1	...		...	...
<i>b c</i> ASSIMILE		...	...	...	...	...	...	...	...	1	...		...	...

A beautiful basket plant, of free growth and graceful habit.

BIRKENHEADII (F.C.C.)	2	3	6
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A distinct free-growing variety raised in our nurseries and sent out in 1887.



ADIANTUM CAPILLUS VENERIS DAPHNITES.

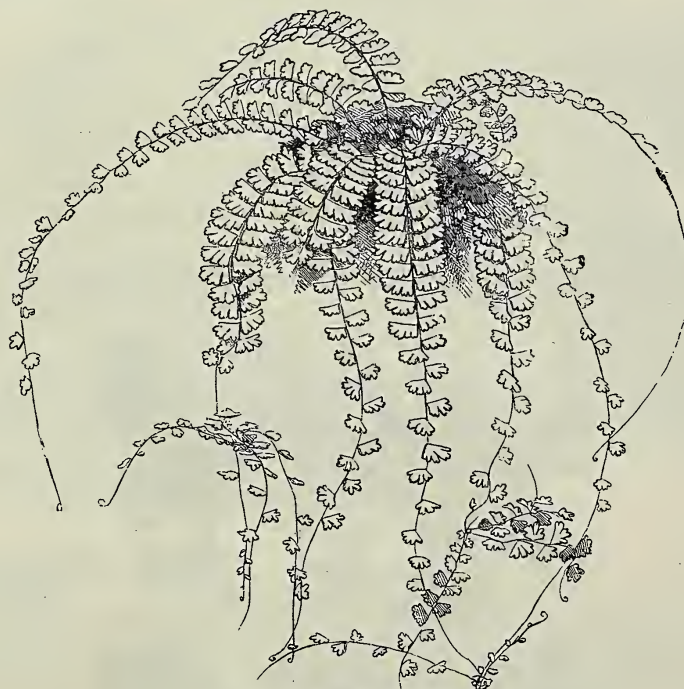
<i>c</i> CAPILLUS VENERIS	...	...	...	...	...	...	...	...	...	$\frac{3}{4}$	...	Europe	...	...	0	6
— CORNUBIENSE	...	...	...	...	...	...	...	...	...	...	...	S. England	...	...	2	6
— DAPHNITES	...	...	...	...	...	...	...	...	...	$\frac{3}{4}$	...	...	...	...	1	6
— DAWSONII	...	...	...	...	...	...	...	...	...	$\frac{1}{2}$	...	...	...	...	1	6
— DENSUM	...	...	...	...	...	...	...	...	...	$\frac{1}{2}$	...	...	...	...	1	6
— ELEGANTISSIMUM	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	6
— FISSUM	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6
— GRACILE	...	...	...	...	...	...	...	...	...	$\frac{3}{4}$	...	...	...	...	1	6
— GRANDE	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	6
— IMBRICATUM	...	...	...	...	...	...	...	...	...	$\frac{3}{4}$	...	...	...	...	3	6

A very pretty variety, producing unusually large leaflets, resembling those of *A. Farleyense*, much cut and imbricated.

ADIANTUM—Continued.

				Average Height.				s. d.	
				feet.					
CAPILLUS VENERIS	MAGNIFICUM	...	...	1	...	...	...	2	6
—	MORITZIANUM	...	...	$\frac{3}{4}$	...	...	...	1	6
—	NATALENSE	...	...	$\frac{3}{4}$	...	Natal	...	1	6
—	O'BRIENIANUM	...	...	1	...	...	...	1	6
—	TENUÆ	...	...	$\frac{1}{2}$	...	...	...	...	...
CHILENSE	...	...	...	1	...	Chili	...	2	6
b CILIATUM	(see illustration)	...	...	...	...	...	...	1	0

This is a valuable addition to our maidenhair Ferns; whilst somewhat resembling *A. caudatum*, the fronds are both longer and wider, the pinnæ being deeply cut and fringed, the colour being a bright green. The growth is vigorous as well as elegant, and for hanging baskets it is especially desirable, as at the point of the pendent fronds young plants grow, usually sending out three fronds each, from the points of which others grow, and so on. *Vide illustration.* This variety is frequently misnamed *Edgworthii*.



ADIANTUM CILIATUM.

c COLPODES	...	...	...	1	...	Ecuador	...	1	0
—	ELEGANS	...	...	$1\frac{1}{2}$	...	...	...	1	0
CROWDERII	...	...	...	$1\frac{1}{2}$	...	...	...	1	6
c CUNEATUM	...	...	...	1	...	Brazil	...	9	6
—	CRENATUM	...	...	1	...	...	...	...	...
—	DEFLEXUM	...	...	1	...	...	...	2	6
—	DISSECTUM	...	...	1	...	...	...	1	6
—	ELEGANS	...	...	1	...	...	...	1	6
—	GRANDICEPS	...	...	1	...	...	...	1	6

A crested variety of *cuneatum*, of drooping habit, attractive in appearance, and well adapted for basket cultivation.

—	LAWSONIANUM	...	...	1	...	...	...	2	6
—	MUNDULUM	...	...	$\frac{3}{4}$	...	...	...	1	0
—	STRICTUM	...	...	1	...	...	...	1	6
—	VARIEGATUM	...	...	1	...	...	...	1	6
DECORUM	...	...	...	1	...	Andes of Peru	...	1	0

A fine, handsome, and very desirable species. (See Illustration.)

DIGITATUM	}	...	...	2	...	...	...	1	6
ÆTHIOPIUM ALATUM		...	...	...	...	...	...	...	...
EMARGINATUM	...	...	...	1	...	N. America	...	1	6

ADIANTUM—Continued.

										Average Height.			
										feet.		s.	d.
c	EXCISUM	...	...	...	...	...	...	...	Chili	1	...	1	6
c	————— MULTIFIDUM	...	...	...	...	...	...	...	...	1	...	1	6
	————— NANUM	...	...	...	...	...	...	...	...	$\frac{1}{2}$	...	1	0
	FORMOSUM	...	...	...	...	...	...	...	New Holland	$2\frac{1}{2}$	...	1	0
	FRAGRANTISSIMUM (not fragrant)	...	...	...	...	...	...	...	...	2	...	1	6
c	FULVUM	...	...	...	...	...	...	...	N. Zealand	$1\frac{1}{4}$	...	1	0
	GLAUCOPHYLLUM	...	...	...	...	...	...	...	...	$\frac{3}{4}$	...	1	6
c	GRACILLIMUM (see illustration)	...	...	...	...	...	...	...	...	...	...	1	0

This is a charming variety, particularly pleasing on account of its light and graceful appearance, produced by the number of its minute pinnules. The fronds are about 18 inches long and 8 or 9 across, the whole appearance being distinct and attractive. It is also a most valuable variety for cutting.—*Vide* illustration.



ADIANTUM DECORUM.



ADIANTUM DIAPHANUM. (A. SETULOSUM.)

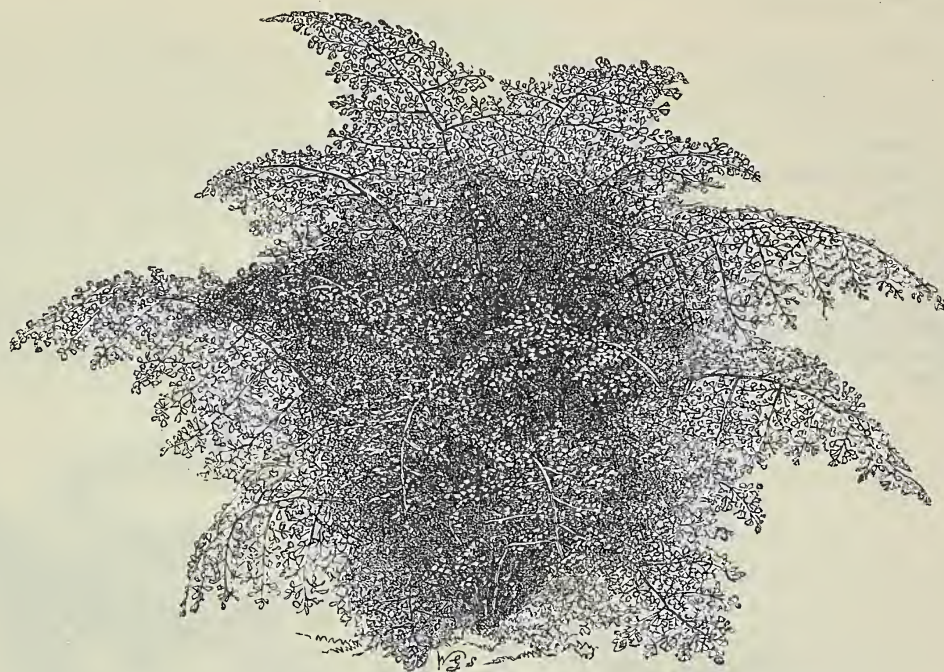
From "The Book of Choice Ferns."

HISPIDULUM	}	...	...	...	...	$1\frac{1}{4}$	...	...	N. Zealand	...	0	6
c PUBESCENS		...	...	...	...	1	...	...	...	...	0	6
HISPIDULUM FULVUM...		...	...	...	...	$\frac{1}{4}$	...	...	N. Zealand	...	1	0
c ————— TENELLUM		...	...	...	...	$1\frac{1}{2}$	...	...	...	...	2	6
HODGKINSONII		...	...	...	...	1	...	...	...	...	3	6
LAMBERTIANUM	}	...	...	...	...	1	...	...	...	...	1	0
FAULKNERII		...	...	...	...	1	...	...	...	...	5	0
LEGRANDII		...	...	...	...	...	...	...	...	...	...	...
LUDDIMANNIANUM		...	...	...	...	...	...	...	...	...	...	...

A remarkable variety. Its peculiarity consists in the pinnules being crested, or agglomerated; they are also much crisped and curled. The fronds grow erect, 8 to 12 inches high, with smooth slender stipes, at first a deep crimson, changing to ebony black when mature.—*Vide* illustration.

MAIRISII ... $1\frac{1}{2}$... 1 0

This is a handsome Fern, possibly a variety of *Adiantum capellus veneris*, but of strong branching habit, with peculiar wedge-shaped pinnules, very ornamental and free growing. Was sent out by us in 1886. In the *Gardeners' Chronicle* of September 5th, 1885, the late Mr. Moore gave a full description of it, concluding his remarks with "We regard it as one of the best of the ornamental group of Maidenhairs."



ADIANTUM GRACILLIMUM.



ADIANTUM LUDDIMANNIANUM.



ADIANTUM PEDATUM.



ADIANTUM PALMATUM.

ADIANTUM—Continued.

Average Height.
feet.

											s.	d.
MONOCHLAMYS	...	...	...	...	1	...	...	Japan	...	...	2	6
PACOTHI	...	...	...	...	1	...	...	...	...	...	0	6

This variety is of exceedingly dense habit, the pinnules overlapping each other to an extent that is most uncommon, thus giving the plant a very striking appearance.

<i>d</i> PALMATUM	2	Peru	5	0
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A very handsome and distinct species owing to the large size of the pinnules and the length of its fronds.—*Vide* illustration.



ADIANTUM TINCTUM.

<i>d</i> PEDATUM	}											
<i>Americanum</i>		...	...	...	...	2½	...	...	N. America	...	...	1 0

A most lovely species; the foliage is pale green, very graceful, and attractive. It is suitable for Stove or Greenhouse cultivation.—*Vide* illustration.

PELLUCIDUM	...	...	...	...	1½	...	...	...	...	...	1	6
PENTAPHYLLUM	...	...	...	...	¾	...	...	...	...	...	1	0
<i>c</i> RENIFORME	...	...	...	...	¾	...	...	Madeira	...	...
ROCHFORDII	...	...	...	...	1	...	...	...	...	...	1	6

ADIANTUM—Continued.

Average Height.

					feet.						s.	d.
ROSEUM	...	...	...	...	$\frac{1}{2}$	...	...	...	...	...	1	6
As its name indicates, the fronds of this dwarf variety, when young, are of a lovely rosy tint.												
c RUBELLUM	...	...	...	...	1	...	...	Bolivia...	...	...	2	6
The fronds of this Fern come up with, and for some time retain, a beautiful ruby tinge, gradually changing to green.												
c DIAPHANUM	}	...	...	...	$\frac{3}{4}$	...	...	Norfolk Island	...	...	1	0
SETULOSUM		...	...	...	...	...	...	...	...	...	...	...
TINCTUM	...	...	...	...	1	...	...	Trop. America	...	...	1	6

A pretty variety, which, like A. rubellum, sends up its young fronds beautifully tinted.



ADIANTUM WILLIAMSII.

VEITCHII	...	...	...	...	1	...	...	...	...	...	2	6
VENUSTUM	...	...	...	...	1	...	...	Himalayas	...	...	2	6
WALTONII	...	...	...	...	1	...	...	...	...	...	2	6
— DIFFUSUM	...	...	...	...	1	...	...	...	...	...	3	6
WILLIAMSII (see illustration)	...	...	...	...	$1\frac{1}{2}$	...	...	Peru	...	...	2	6

A fine growing species of Maidenhair, slightly golden underneath the fronds.

ALEURITOPTERIS

MEXICANA, syn., Cheilanthes pulveracea...	1	Mexico...	2	6
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ALSOPHILA (Tree Ferns)Average Height.
feet.

s. d.

ATRO-VIRENS	Brazil
AUSTRALIS	Australia	5 0
EXCELSA	...	...	...	...	...	...	...	Queensland	...	...	2 6
PRUINATA	...	...	...	...	...	...	...	Trop. America	...	...	5 0
REBECCÆ	...	...	...	...	...	...	...	Queensland	...	...	7 6
VAN GEERTII	...	...	...	...	...	...	...	...	...	...	3 6



ALSOPHILA REBECCÆ.

ANAPELTIS, *syns., Pleopeltis, Polypodium*

<i>c</i> LYCAPODIOIDES	...	...	...	...	$\frac{1}{4}$	...	...	W. Indies	...	...	1 0
———— SALICIFOLIA	...	...	...	...	$\frac{1}{3}$	...	...	Central America	...	...	1 0
<i>c</i> NITIDA	...	...	...	...	$\frac{1}{3}$	...	...	Honduras	...	...	1 0
<i>c</i> SQAMULOSA	...	...	...	...	$\frac{1}{4}$	...	...	Brazil	...	...	1 0

ANEMIA

DREGEANA	...	...	...	...	1	...	...	S. Africa	...	...	...
VILLOSA	...	...	...	...	1	...	...	Brazil	...	...	2 6

ANEMIDICTYON

<i>c</i> PHYLLITIDIS, <i>syns., Anemia p., A. fraxinifolia, Osmunda p.</i>	...	...	...	...	1½ft.	...	...	Trop. America	...	...	1 0
———— TESSELLATA	...	...	...	...	1½	...	...	...	...	...	...



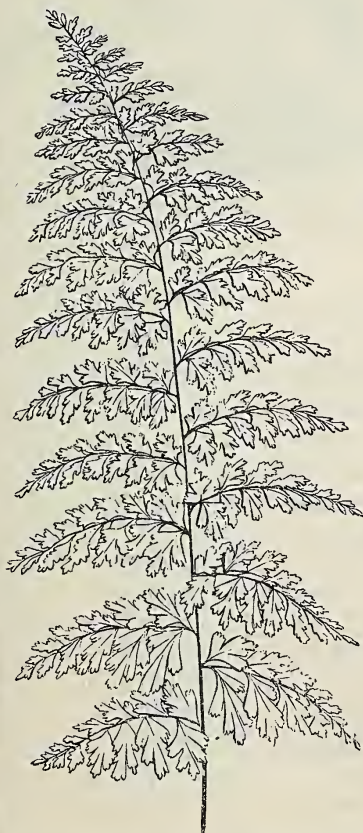
ARTHROPTERIS
TENELLA.



ASPENIUM FONTANUM.



ASPIDIUM CRISTATUM
FLORIDANUM.



ASPENIUM PRÆMORSUM LACERATUM.



ASPENIUM HEMIONITIS.

ANGIOPTERIS

				Average Height.				s. d.	
				feet.					
EVECTA, syns.,	Polypodium e.,	Danæ e.	...	7	...	...	Ceylon...	...	...

ARTHROPTERIS

c TENELLA } filipes }	syns. { Polypodium t. }		...	1/3	...	...	New Zealand	...	2 6
	,, f. }								

ASPIDIUM

CRISTATUM FLORIDANUM, syns.,	Lastrea c. F.,	Nephrodium c. F.	1 1/2	Florida	...	...	1 6
MACROPHYLLUM	...	...	1 1/2	...	...	Trop. America	...
MOHRIOIDES, syn.,	Polystichum m....	...	1	...	...	N. America	3 6
PATENS	...	...	1 1/2	...	...	N. America	2 6
PILOSUM	...	...	1	...	...	S. Europe	2 6
PUNGENS	...	...	1 1/2	...	...	S. Africa	3 6
RIGIDUM ARGUTUM	...	...	1	...	...	N. America	1 6
TENERUM	...	...	2	...	...	Queensland	...
UNITUM GLABRUM	...	...	1 1/2	...	...	N. America	1 6
VARIOLOSUM	...	...	2	...	...	India	1 6



ASPLENIUM SEELOSII.

ASPLENIUM

AFFINE...	...	...	1 1/2	...	...	S. Africa	2 6
ALTERNANS } Dalhousiae }	...	...	1/2	...	...	E. Indies	...
ANGUSTIFOLIUM	...	...	1 1/2	...	...	N. America	1 0
ANISOPHYLLUM	...	...	1 1/2	...	...	S. Africa	3 6
ATTENUATUM	...	...	1/2	...	...	N. S. Wales	2 6
AUSTRALASICUM (see illustration)	...	...	3	...	...	Australia	2 6
BIFOLIUM } diversifolium }	...	...	3	...	...	Hispaniola	0 6
BRACHYPTERON	...	...	1	...	...	W. America	3 6
BRADLEYI	...	...	1/2	...	...	N. America	...
BULBIFERUM	...	...	3	...	...	N. Zealand	1 0
———— COLENSOII	...	...	1 1/2	...	...	...	1 0
CAUDATUM	...	...	4	...	...	Polynesia	2 6
c COLENSOII	...	...	1 1/2	...	...	N. Zealand	...
CONSIMILE	...	...	1	...	...	Chili	3 6
CUNEATUM	...	...	1 1/2	...	...	S. Africa	3 6
DIMORPHUM } diversifolium }	...	...	1 1/2	...	...	Norfolk Island	...

ASPLENIUM—Continued.

Average Height.
feet.

s. d.

EBENEUM	}	...	...	...	1	...	...	N. America	...	...	1	0
<i>polypodioides</i>												
EBENOIDES	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...
FALCATUM	...	...	...	...	1	...	...	New Zealand	...	...
c FERNANDEZIANUM	...	...	...	...	$\frac{3}{4}$	...	...	Colombia	...	...	1	0
FISSUM	...	...	...	...	$\frac{1}{2}$	...	...	S. Europe	...	...	2	6
b FLABELLIFOLIUM	...	...	...	...	$\frac{3}{4}$	...	...	Australia	...	...	1	6
— RICHARDSONII	...	...	...	...	$\frac{1}{2}$	...	...	...	...	...	1	6
b FLACCIDUM	}	syn., Cænopteris, f	...	...	1 $\frac{1}{2}$	...	...	N. Zealand	...	...	2	6
<i>odontites</i>												
<i>fabianum</i>	}	...	...	...	2	...	...	Mexico	...	...	1	0
c FENICULACEUM												
c FONTANUM	}	(see illustration)	...	...	$\frac{1}{2}$	...	...	Europe...	...	...	1	6
<i>Halleri</i>												



ASPLENIUM ZEYLANICUM.

BLECHNUM BRAZILIENSE.
(From "The Book of Choice Ferns.")

GEMMIFERUM	...	...	...	...	1 $\frac{1}{2}$	...	...	S. Africa	...	...	3	6
GRACILE	...	...	...	...	1	...	...	S. Africa	...	...	3	6
HEMIONITIS	}	(see illustration)	...	...	1	...	...	S. Europe	...	...	2	6
<i>palmatum</i>												
HEMIONITIS CRISTATUM	...	...	...	...	1	...	...	...	...	...	2	6
HULLII	...	...	...	...	1 $\frac{1}{2}$	...	...	...	...	...	3	6
LAXUM PUMILUM	...	...	...	...	1 $\frac{1}{2}$	...	...	...	...	...	1	6
LUCIDUM, syn., Diplazium l.	...	...	...	...	2	...	...	New Zealand	...	...	2	6
LUNULATUM var. brachyotus	...	...	...	...	1	...	...	S. Africa	...	...	2	6
LYALLII	...	...	...	...	$\frac{3}{4}$	...	...	New Zealand	...	...	2	6
b MACROPHYLLUM	}	...	...	...	2	...	...	Mauritius	...	...
<i>nitens</i>												
MAGELLANICUM	...	...	...	...	1	...	...	S. America	...	...
MONANTHEMUM	...	...	...	...	1	...	...	S. Africa	...	...	1	6
NIPONICUM	...	...	...	...	1	...	...	Japan	...	...	2	6
OBTUSATUM	...	...	...	...	1	...	...	New Zealand	...	...	2	6
PALEACEUM	...	...	...	...	1	...	...	Trop. Australia	...	...
PARVULUM	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...
PETRARCHÆ	...	...	...	...	$\frac{1}{6}$	...	...	S. Europe	...	...
PINNATIFIDUM	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...

ASPLENIUM—Continued.

						Average Height.							
						feet.				s.	d.		
PRÆMORSUM, syn., FURCATUM						1½	...	...	Mauritius	...	3	6	
CANARIENSE						1	...	...	...	...	2	6	
LACERATUM (see illustration)						1½	...	...	...	...	2	6	
c	RESECTUM	...	...	...	...	1	...	...	Mauritius	...	2	6	
	RUTÆFOLIUM	...	...	...	...	1	...	...	S. Africa	...	1	6	
	SEELOSII	...	...	...	...	1⅙	...	...	Tyrol	...	...	...
	SERRA	...	...	...	...	1½	...	...	Brazil	...	2	6	
	SERRA NATALENSIS (new)	...	...	...	...	...	...	...	Natal	...	5	0	
	TENELLUM	}	...	...	...	1	...	...	Tropics	...	1	6	
	reclinatum												
	THUNBERGII	...	...	...	...	1	...	...	S. Africa	...	...	...
	UMBROSUM, syn., Allantodia u.	...	...	...	...	3	...	...	Madeira	...	1	6	
	VIVIPARUM	...	...	...	...	1½	...	...	Mauritius	...	2	6	
	ZEYLANICUM	...	...	...	...	1	...	...	Ceylon	...	2	6	

ATHYRIUM

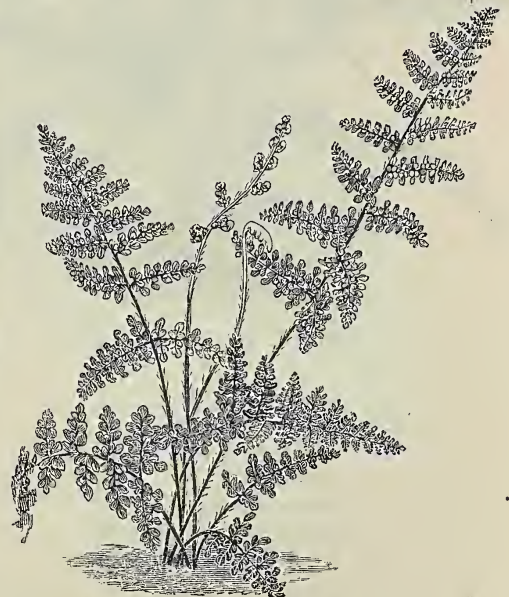
d	GORINGIANUM PICTUM	...	...	...	...	1½	...	...	Japan	...	1	6	
	LAXUM, syn., Asplenium aspidioides	2	Cape Colony	...	2	6	

BALANTIUM

	CULCITUM, syn., Dicksonia c.	3	Azores	...	5	0	
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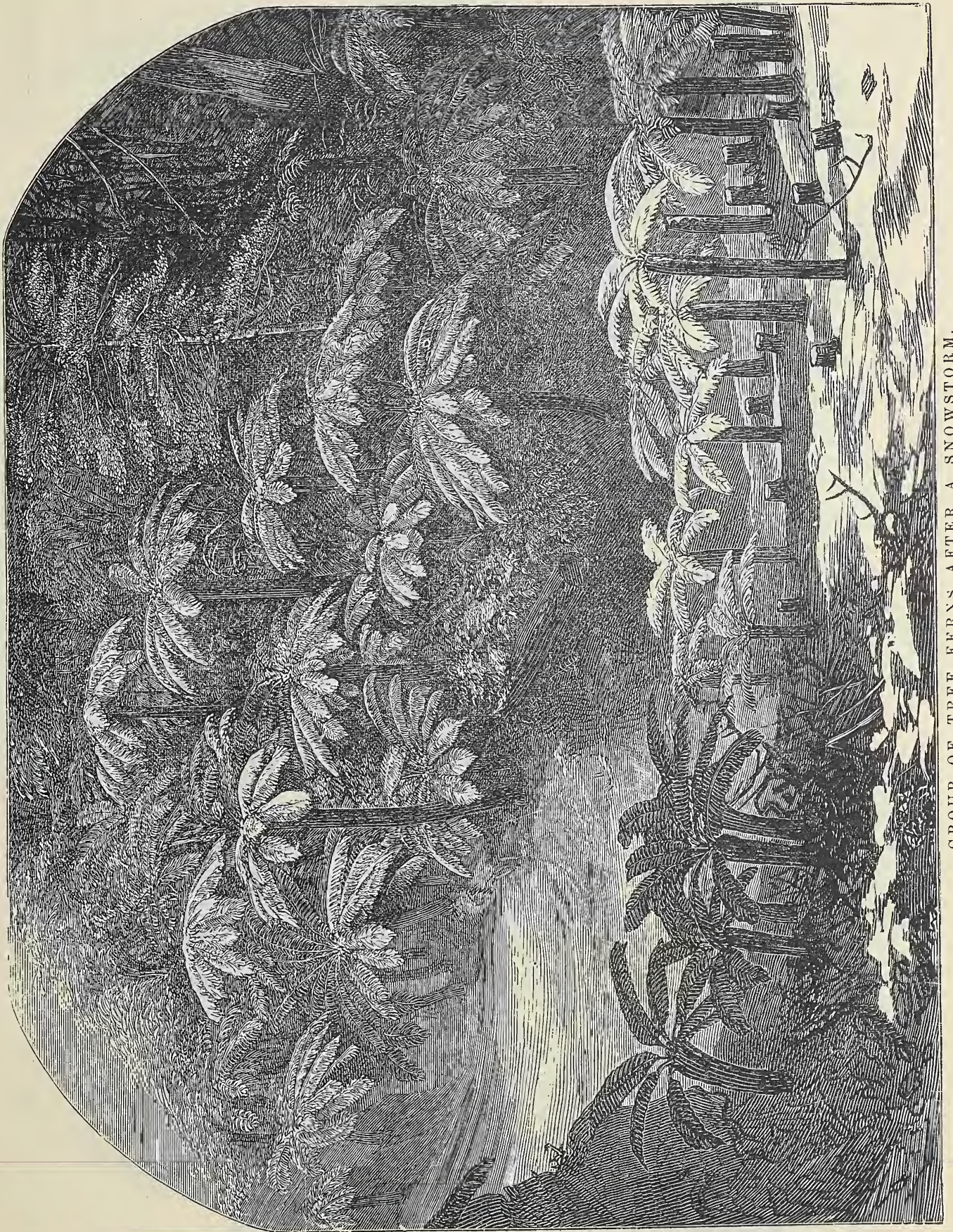
CAMPTOSORUS RHIZOPHYLLUS.



CHEILANTHES CLEVELANDII.

BLECHNUM

	ATHERSTONII	1	S. Africa	
	BRAZILIENSE (Tree Fern)	...	...	...	...	...	...	...	Brazil	...	...	...
	CARTILAGINEUM	...	...	...	...	1½	...	...	Australia	...	1	6	
	CORCOVADENSE (Tree Fern)	...	...	...	...	...	...	...	Brazil	...	1	6	
	CRISPUM	...	...	...	...	...	...	...	...	...	2	6	
b	GLANDULOSUM	...	...	...	...	2	...	...	Brazil	...	1	6	
	CRISTATUM	...	...	...	...	1	...	...	...	...	2	6	
	HASTATUM	...	...	...	...	1	...	...	Chili	...	1	0	
b	OCCIDENTALE	}	...	...	...	1½	...	...	Brazil	...	2	6	
	conjugatum												
	PLATYPTERA, syn., Lomaria platyptera (Tree Fern)	...	...	...	...	...	...	...	...	...	...	...
b	POLYPODIOIDES	...	...	...	...	1½	...	...	Brazil	...	1	0	
	SERRULATUM	...	...	...	...	1	...	...	N. America	...	...	...



GROUP OF TREE FERNS AFTER A SNOWSTORM.

BOTRYCHIUM

								Average Height.			
								feet.		s.	d.
MATRICARIÆFOLIUM	...	...	...	...	...	...	...	$\frac{1}{2}$	...	N. America	1 6
TERNATUM	...	...	...	...	...	...	...	$\frac{1}{2}$	...	N. America	1 6
VIRGINICUM	...	...	...	...	...	...	...	$\frac{3}{4}$	...	N. America	1 6

BRAINEA (Tree Fern)

INSIGNIS	Hong Kong	...
----------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----------	-----

CALLIPTERIS

Sylvatica, syns., Asplenium acuminatum, Diplazium a., D. sylvaticum, 3ft., E. Indies	...	1	0
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CAMPTOSORUS (The Walking Leaf Fern)

Rhizophyllum, syns., Asplenium r., Scolopendrium r., $\frac{1}{2}$ ft.	...	N. America	...	1	0
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CETERACH

Aureum	1	Madeira
--------	-----	-----	-----	-----	---	-----	-----	---------	-----	-----



DAVALLIA CANARIENSIS.

CHEILANTHES

ALABAMENSIS...	$\frac{3}{4}$	N. America	...	5	0
CALIFORNICA, syn., Hypolepis C.	...	...	...	...	...	...	...	California	...	2	6
A beautiful variety, with small bright green, triangular fronds.											
CAPENSIS, syns., Adiantopsis C., Hypolepis C.	...	...	...	...	$\frac{1}{2}$	...	...	S. Africa	...	...	...
CLEVELANDII (see Illustration)	...	...	...	...	1	...	...	N. America	...	3	6
COOPERÆ	...	...	...	...	...	...	...	N. America	...	...	...
EATONII	...	...	...	...	...	...	...	N. America	...	2	6
ELEGANS	...	...	...	...	$1\frac{1}{2}$	...	...	Trop. America	...	2	6
FARINOSA	...	...	...	...	1	...	...	E. Indies	...	2	6
FENDLERII	...	...	...	...	...	...	...	N. America	...	...	...
GRACILLIMA	...	...	...	...	$\frac{1}{4}$	...	...	California	...	2	6
HIRTA	} syns. {	Myriopteris h. {		...	1	...	...	S. Africa	...	1	6
Ellisiana		Nothoclœna h. {		...	...	...	...	...	...	...	...
LEUCOPODA	...	...	...	...	$\frac{3}{4}$	...	...	N. America	...	...	...
LINDHEIMERII	...	...	...	...	...	...	...	N. America	...	...	...



CYATHEA DEALBATA.

DICKSONIA ANTARCTICA.

DICKSONIA SQUARROSA.

CHEILANTHES—Continued.

					Average Height.							s.	d.
					feet.								
MICROMERA	...	...	...	...	$\frac{1}{3}$	...	...	...	...	...	...	2	6
MICROPHYLLA	...	...	...	...	$\frac{3}{4}$	...	...	N. America	...	...	...	2	6
MULTIFIDA	...	...	...	...	1	...	...	S. Africa	...	...	...	2	6
MYRIOPHYLLA	...	...	...	...	1	...	...	Trop. America, India	...	...	...
<i>fragrans</i>	}	...	...	...	$\frac{1}{2}$	...	...	Switzerland	...	...	...
ODORA													
PULCHELLA	...	...	...	...	$\frac{1}{2}$	...	...	Teneriffe	...	...	...
SIEBERII	}	...	...	...	1	...	...	N. Zealand	...	...	...
<i>Preissiana</i>													
TENUIFOLIA	...	...	...	...	1	...	...	N. Zealand	...	...	...
TENUIS...	...	...	...	...	1	...	...	Trop. America	...	...	...	2	6
TOMENTOSA	...	...	...	...	1	...	...	Mexico	...	...	...	2	6
VESTITA, syns.,	Notholaena v., Myriopteris v.				$\frac{3}{4}$	...	...	N. America	...	...	...	1	6
VISCIDA	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...	...
VISCOSA	...	...	...	...	1	...	...	Trop. America	...	...	...	2	6
WRIGHTII	...	...	...	...	$\frac{3}{4}$	...	...	N. America	...	...	...



DAVALLIA TENUIFOLIA VEITCHIANA.

CIBOTIUM (Tree Ferns), syn., *Dicksonia*

BAROMETZ	}	(Not a Tree Fern)	...	...	9	...	...	China	...	...	...	2	6
<i>glaucescens</i>													
PRINCEPS, syn.,	Cyathea p.		Mexico	3	6
REGALE	...	...	...	...	...	...	...	Mexico	...	...	...	3	6
SCHIEDII	...	...	...	...	...	...	...	Mexico	...	...	...	3	6
SPECTABILE	...	...	...	...	...	...	...	Guatemala	...	...	...	3	6

CYATHEA (Tree Ferns)Average Height.
feet.

										s.	d.
DEALBATA	...	...	...	...	...	...	...	N. Zealand	...	3	6
DREGEI	...	...	...	...	...	...	...	Africa...	...	5	0
MEDULARIS	...	...	...	...	...	...	...	N. Zealand	...		
PRINCEPS, syn., Cibotium p...	...	...	...	...	...	...	...	Mexico	...		
YOUNGH	...	...	...	...	...	...	...	...	...	3	6



DAVALLIA HEMIPTERA.

SYN., DAVALLIA REPENS.

CYRTOMIUM

c	CARYOTIDIUM, syn., Aspidium c.	...	...	1½	...	...	Natal	...	...	1	0
	— ATTENUATUM	...	...	1½	...	...	E. Indies	...	...	1	0
c	FALCATUM, syn., Aspidium f., Polypodium f.	...	...	1½	...	...	Japan	...	...	1	0
	ANOMOPHYLLUM										
c	FORTUNEI	}	syn., Aspidium f.	...	1½	...	Japan	...	...	1	0
	Orientalis										
	INTERMEDIUM	...	...	...	1½	...	...	...	...	1	6
	JUGLANDIFOLIUM, syn., Aspidium J.	...	...	1	...	...	N. America	...	...	2	6

CYSTOPTERIS*Average Height.*
feet.

<i>d</i> BULBIFERA, syn., Aspidium b., Polypodium b.	1	...	...	N. America	...	...	s. d.
TENUIS...	...	...	...	N. America	...	...	1 0
							1 6

DAVALLIA

<i>bc</i> BULLATA (The Squirrel's Foot Fern)	...	$\frac{3}{4}$	...	E. Indies	...	...	1 6
<i>c</i> CANARIENSIS (The Hare's Foot Fern)	...	$1\frac{1}{2}$	...	Canary Islands	...	...	2 6
<i>c</i> ————— PULCHELLA	...	$1\frac{1}{2}$	...	...	...	...	2 6
<i>bc</i> HEMIPTERA } syn., Acrophorus h.	...	1	...	Ceylon, Java	...	...	2 6
REPENS							

A pretty dwarf-growing species, well adapted for Hanging Baskets or Cases.



DAVALLIA MARIESII.

LAWSONIANA	...	1	...	...	...	1 6
LINDLEYANA	...	1	...	Java	...	2 6
LORRAINII	...	1	...	Malay Peninsula	...	1 6
MARIESII	...	$\frac{3}{4}$	...	Japan	...	1 6

A very beautiful variety, with finely-cut fronds.

———— CRISTATA	...	$\frac{3}{4}$	...	Japan	...	2 6
MOOREANA } ...	...	3	...	Borneo	...	2 6
PALLIDA }	...					

A splendid large-growing kind, fine for Baskets and for Exhibition purposes.

Average Height.
feet.

					Average length.			s.	d.
					feet.				
c CAUDATA CONFLUENS } linearis	...	...	...	...	$\frac{1}{2}$	...	New Caledonia	...	
DIVES ... }	...	...	...	...	$\frac{1}{2}$	...	Ceylon...	...	1 6
b c LUNULATA } media	...	...	...	...	1	...	N. Zealand	...	0 6
MEDIA CRISPA ... }	...	...	...	...	$\frac{1}{3}$	...	...	...	2 6

SAGITTIFOLIA, syns., Litobrochia s., Pteris s.	1	Brazil	3	6
ALCYONIS	1	3	6

PUSTULATA, syn., Pleopeltis p.	1	N. Zealand	1	0
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GLEICHENIA DICARPA LONGIPINNATA.

DICARPA	2	Tasmania	3	6
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DICARPA LONGIPINNATA (see illustration)...	2	Australia	5	0
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A new variety, very graceful and elegant, of free growth, with longer fronds than *dicarpa*,

FLABELLATA	3	Australia	5	0
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[illegible]

GLEICHENIA—Continued.

					Average Height.				s.	d.
					feet.					
RUPESTRIS	3	N. S. Wales	...	7 6
GLAUDESCENS	...	...	...	...	2	...	...	...	...	5 0

A very distinct variety of *G. rupestris*. The fronds are of much thicker texture and of a lovely glaucous hue.

SEMIVESTITA	2	New Caledonia	...	3 6
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This is one of the hardiest varieties of this choice, useful, and beautiful family, growing much better in a cold house than in a warm one; it will even stand a few degrees of frost without having its beauty interfered with. In appearance it resembles "*G. dicarpa*" very much, but it grows larger, and is considerably hardier.

SPELUNCÆ	3	N. S. Wales	...	5 0
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One of the most handsome of this genus, a first-class Fern for exhibition, decoration, or cutting. It grows rapidly, and is very hardy.



GLEICHENIA SEMIVESTITA.



GLEICHENIA SPELUNCÆ.

GONIOPTERIS

CRENATA	...	...	...	...	1	...	...	W. Indies	...	1 6
PENNIGERUM	...	...	...	...	1½	...	...	New Zealand	...	1 6
UNITA, syn., Polypodium u...	...	...	...	...	2	...	...	S. Africa	...	2 6

GYMNOGRAMMA

LEPTOPHYLLA	...	...	...	...	1/3	...	...	Jersey	...	...
OCHRACEA (see illustration)	...	...	...	...	1	...	...	Trop. America	...	1 0
TOTTA	...	...	...	...	1	...	...	Madeira	...	2 6
TRIANGULARIS	...	...	...	...	...	...	...	California	...	1 6

A beautiful dwarf, half-hardy, golden Fern from California.

VESTITA	1	India	...	3 6
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HEMIONITIS

CORDATA	}	1	E. Indies	...	1 6
cordifolia	
sagittata	
PALMATA (see illustration, page 18)		3/4	W. Indies	...	1 6

HYMENOPHYLLUM (Filmy Ferns)

ABRUPTUM	...	...	...	...	1½	...	...	West Indies	...	5 0
ÆRUGINOSUM	...	...	...	...	1½	...	...	New Zealand	...	10 6
ASPLENIOIDES	...	...	...	...	1½	...	...	West Indies	...	10 6

HYMENOPHYLLUM—Continued.

Average Height.
feet.

s. d.

ATTENUATUM	}	...	...	...	...	$\frac{1}{2}$	...	Chili ...	...	10	6
MAGELLANICUM		...	...	...	...	$\frac{1}{2}$	...	...	...	...	...
BIVALVE		...	...	...	...	1	...	New Zealand ...	...	...	...
CATHARINÆ		...	...	...	...	$\frac{1}{2}$	...	Jamaica ...	...	7	6
CAUDICULATUM		...	...	...	...	$\frac{3}{4}$	...	...	...	5	0
CHILOENSE		...	...	...	...	$\frac{1}{2}$	...	Chiloe ...	...	5	0
CILIATUM	}	...	...	...	...	$\frac{1}{3}$	...	West Indies ...	...	5	0
PLUMIERII		...	...	...	...	$\frac{1}{3}$	...	...	...	...	...
CRISPATUM		...	...	...	...	$\frac{1}{2}$	...	New Zealand ...	...	5	0
CRISPUM		...	...	...	...	$\frac{1}{4}$	...	West Indies ...	...	...	...
CRUENTUM		...	...	...	...	$\frac{1}{2}$	...	Chili ...	...	...	...
DEMISSUM		...	...	...	...	$\frac{1}{2}$	...	Lord Howe's Island..	3	6	
c DEMISSUM		...	...	...	...	1	...	New Zealand...	2	6	
— NITIDUM		...	...	...	...	$\frac{1}{2}$	...	New Zealand...	1	6	
DICHOTOMUM		...	...	...	...	$\frac{1}{3}$	...	Chili ...	...	...	...



GYMNOGRAMMA OCHRACEA.



GYMNOGRAMMA TRIANGULARIS.

HYMENOPHYLLUM—Continued.

DILATATUM	...	...	...	...	...	1	...	New Zealand ...	...	10	6
FLABELLATUM	...	...	...	...	...	$\frac{1}{2}$	...	New Zealand	...	10	6
c FLEXUOSUM	...	...	...	...	...	$\frac{1}{2}$	...	New Zealand	...	7	6
FORSTERIANUM	...	...	...	...	...	$\frac{1}{2}$	...	Brazil ...	...	5	0
FUCOIDES	...	...	...	...	...	$\frac{1}{3}$	...	Trop. America	...	10	6
HIRSUTUM	...	...	...	...	...	$\frac{1}{2}$	...	Trop. America	...	5	0
HIRTELLUM	...	...	...	...	...	1	...	West Indies ...	...	10	6
JAVANICUM	...	...	...	...	...	$\frac{1}{2}$	...	Java ...	...	10	6
MULTIFIDUM	...	...	...	...	...	1	...	West Indies ...	...	10	6
PECTINATUM	...	...	...	...	...	$\frac{1}{2}$	...	Chili ...	...	...	...
POLYANTHOS	...	...	...	...	...	$\frac{1}{3}$	...	West Indies ...	...	7	6
— SPHÆROCARPUM	...	...	...	...	...	$\frac{1}{3}$	...	West Indies ...	...	5	0
PULCHERRIMUM	...	...	...	...	...	$\frac{3}{4}$	...	New Zealand	...	...	...
RARUM	...	...	...	...	...	$\frac{1}{3}$	...	New Zealand ...	...	7	6

HYMENOPHYLLUM—Continued.

					Average Height.					
					feet.				s.	d.
SCABRUM	...	...	...	...	1	...	...	New Zealand	...	7 6
SERICEUM	}	...	...	...	...	...	...	West Indies	...	10 6
PLUMOSUM		...	...	...	...	...	...
TRIFIDUM	}	...	...	...	...	1	...	Trop. America	...	10 6
<i>elegans</i>		...	...	...	...	...	...
<i>lineare</i>		...	...	...	...	...	...
<i>pendulum</i>										
TUNBRIDGENSE	...	...	...	...	$\frac{1}{2}$	...	...	Chili	...	2 6
^c TUNBRIDGENSE	}	...	...	...	$\frac{1}{4}$	...	...	Europe	...	1 6
<i>cupressiforme</i>		...	...	...	...	...	...
^c WILSONII	}	...	...	...	$\frac{1}{6}$	...	...	Europe	...	1 0
UNILATERALE		...	...	...	...	...	...

All Filmy Ferns require a very moist atmosphere, and a shady situation.



HYMENOPHYLLUM TUNBRIDGENSE.



HYMENOPHYLLUM WILSONII.

HYPOLEPIS

AMAUORACHIS	...	...	...	...	2	...	...	Australia	...	...
ANTHRISCIFOLIA	...	...	...	...	$1\frac{1}{2}$	...	...	S. Africa	...	1 6
^e BERGIANA	...	...	...	...	$1\frac{1}{4}$	...	...	Cape Colony, Natal	...	1 6

A very rare and distinct Fern, somewhat resembling a Cheilanthes in appearance, fronds triangular; a very pretty plant for basket or pot culture.

CALIFORNICA	...	...	...	...	$\frac{1}{2}$	...	...	California	...	2 6
^{b c} DISTANS	...	...	...	...	1	...	...	New Zealand	...	1 6
MILLEFOLIA	...	...	...	...	1	...	...	New Zealand	...	1 6
REPENS...	...	...	...	...	3	...	...	W. Indies	...	1 0
RUGULOSA	...	...	...	...	2	...	...	...	...	1 6
TENUIFOLIA	...	...	...	...	2	...	...	New Zealand	...	1 6

LASTREA, syn., *Nephrodium*

^c ACUMINATA	}	...	...	...	1	...	...	N. Zealand	...	1 6
<i>atrovirens</i>		...	...	...	...	...	...
<i>Shepherdii</i>		...	...	...	...	...	...
ARISTATA, syn., <i>Polystichum a.</i>	...	...	...	...	1	...	...	Assam...	...	1 0
— VARIEGATA, syn., <i>Polyst. a.v.</i>	...	...	...	...	...	...	...	...	...	1 0
ATRATA, syn., <i>Cyrtomium a....</i>	...	...	...	...	2	...	...	India	...	1 0
CATOPTERON, syn., <i>Nephrodium c.</i>	...	...	...	...	4	...	...	Cape Colony	...	1 6
CHRYSOLOBA	...	...	...	...	$1\frac{1}{2}$	...	...	Brazil	...	1 6
CORUSCA	...	...	...	...	1	...	...	Japan	...	1 0
DECOMPOSITA, syn., <i>Nephrodium d.</i>	...	...	...	...	1	...	...	New Zealand	...	2 6

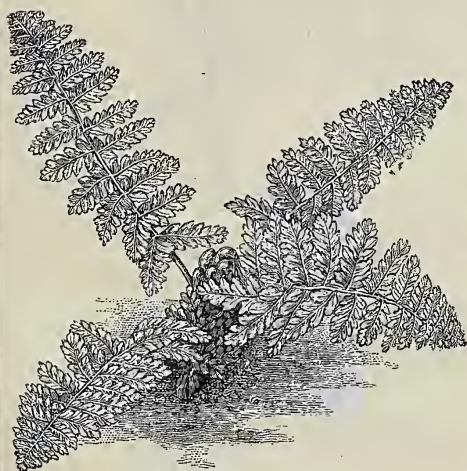
LASTREA—Continued.

Average Height.
feet.

s. d.

d	DECURRENS	} syn., Polypodium d. p.	2	...	...	Japan ...	...	...	1	0
	<i>decursive-pinnata</i>									
	DILATATA FOLIOSO-DIGITATA	...	2	...	...	Azores	...	...	2	6
	DISSECTA	...	2	...	...	India	...	...
	ERYTHROSORA, syn., Nephrodium e.	...	2	...	...	Japan	...	...	1	6
	FRAGRANS, syn., Aspidium fragrans	...	$\frac{1}{2}$	...	...	N. America	..	...	3	6
A pretty dwarf, violet-scented Fern, hardy, very rare, and desirable.										
	FRONDOSA, syn., Polystichum f.	...	$2\frac{1}{2}$	...	...	Madeira	...	...	3	6
c	GLABELLA, syn., Nephrodium g.	...	1	...	...	N. Zealand	...	...	1	6
	HISPIDA, syn., Polystichum h.	...	$1\frac{1}{2}$	...	...	N. Zealand	...	...	1	6
	INÆQUALE	...	3	...	...	Cape Colony	...	...
	—— MONTANA	...	2	...	...	Cape Colony	...	...
	INVISIA	...	4	...	...	W. Indies	...	...	1	6
	JENMANNII	...	$1\frac{1}{2}$	...	...	Jamaica	...	...	1	6
	KAULFUSSII	...	2	...	...	Brazil	...	...	2	6
	LEPIDA...	...	1	...	...	...	...	...	1	6
	LUCIDA	...	$1\frac{1}{2}$	...	...	...	...	...	1	0
	MEMBRANIFOLIA	...	2	...	...	India, Ceylon...	...	...	2	6
	OPACA	...	2	...	...	China	...	...	1	0
	PALLIDA	...	1	...	...	S. Europe	...	...	2	6
	PATENS, syn., Aspidium p.	...	$1\frac{1}{2}$	...	...	N. America	...	...	1	6
	—— SUPERBA	...	2	...	...	...	...	...	1	6
	<i>podophylla</i>	} syn., Pycnopteris s.	2	...	...	Japan	...	...	1	0
	SIEBOLDII									
	PROLIFICA	...	1	...	...	Japan	...	...	1	0

An interesting hardy evergreen Fern, which produces numerous buds on the fronds, giving the plant a very remarkable appearance.



LASTREA FRAGRANS.
(The Violet Scented Fern.)



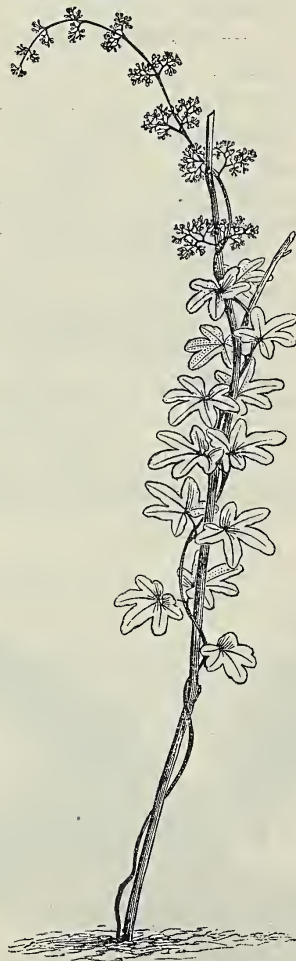
LASTREA RICHARDSII MULTIFIDA.

c	PUBESCENS, syn., Nephrodium p.	...	1	...	...	Jamaica	...	...	1	6
	QUADRANGULARIS	...	2	...	...	...	...	...
	QUINQUANGULARIS	...	$1\frac{1}{2}$	...	...	...	...	...	2	6
	RICHARDSII MULTIFIDA	...	2	...	...	...	...	...	1	6
A fine free growing, crested Fern, soon makes a specimen plant, very useful for decorative purposes.										
	SPINESCENS	...	$\frac{1}{2}$	...	...	E. Indies	...	...
	UNITA, syns., Aspidium u., Aspidium serra, Nephrodium u.	2ft.				Tropics	...	...
	—— GLABRA, syn., Aspidium u. g.	...	$1\frac{1}{2}$	...	...	N. America	...	...	1	6
	VARIA, syn., Polypodium v.	...	2	...	...	China	...	...	1	0

LEPICYSTIS , syn., <i>Polypodium</i>				Average Height. feet.				s.	d.
SEPULTA, syns., <i>Goniophlebium</i> s., <i>Polypodium</i> s., <i>Polypodium</i>									
rufulum, <i>Polypodium hirsutissimum</i> ...				1½	...	...	Trop. America	...	
SQUAMATA, syn., <i>Polypodium</i> s. ...				1½	...	...	W. Indies	...	2 6
LEUCOSTEGIA , syn., <i>Davallia</i>									
CHÆROPHYLLA... ..				1½	...	...	E. Indies	...	2 6
d IMMERSA, syns., <i>Acrophorus</i> i., <i>Davallia</i> i., <i>Humata</i> i. 1½ft. ...							E. Indies	...	1 6
A handsome variety, with pale green fronds, prettily tinted brown when young.									
				1	...	...	Nepal	...	1 6
LINDSAYA									
LINEARIS				1	...	...	Queensland	...	



LOMARIA CILIATA.

LYGODIUM PALMATUM.
(From "The Book of Choice Ferns.")

LITOBROCHIA , syn., <i>Pteris</i>									
AURITA, syn., <i>Pteris</i> a.				2½	...	...	Malay Islands	...	1 6
INCISA				1½	...	...	New Zealand	...	1 6
KARSTENIANA... ..				1½	...	...	Trop. America	...	3 6
VESPERTILIONIS, syn., <i>Pteris</i> v.				2½	...	...	E. Indies	...	1 6
LOMARIA									
c ALPINA }				½	...	...	N. Zealand	...	1 0
antarctica }									
ALPINA RAMOSA				½	...	...	...	...
ASPERA				1	...	...	Chili	...	2 6
A dwarf, compact species, with short, dark green fronds. It is of creeping habit and very hardy.									
c ATTENUATA, syn., <i>Blechnum</i> a. (Tree Fern) 2							Brazil	...	3 6
BANKSII				½	...	...	N. Zealand	...	1 6

L'LAVEAAverage Height.
feet.

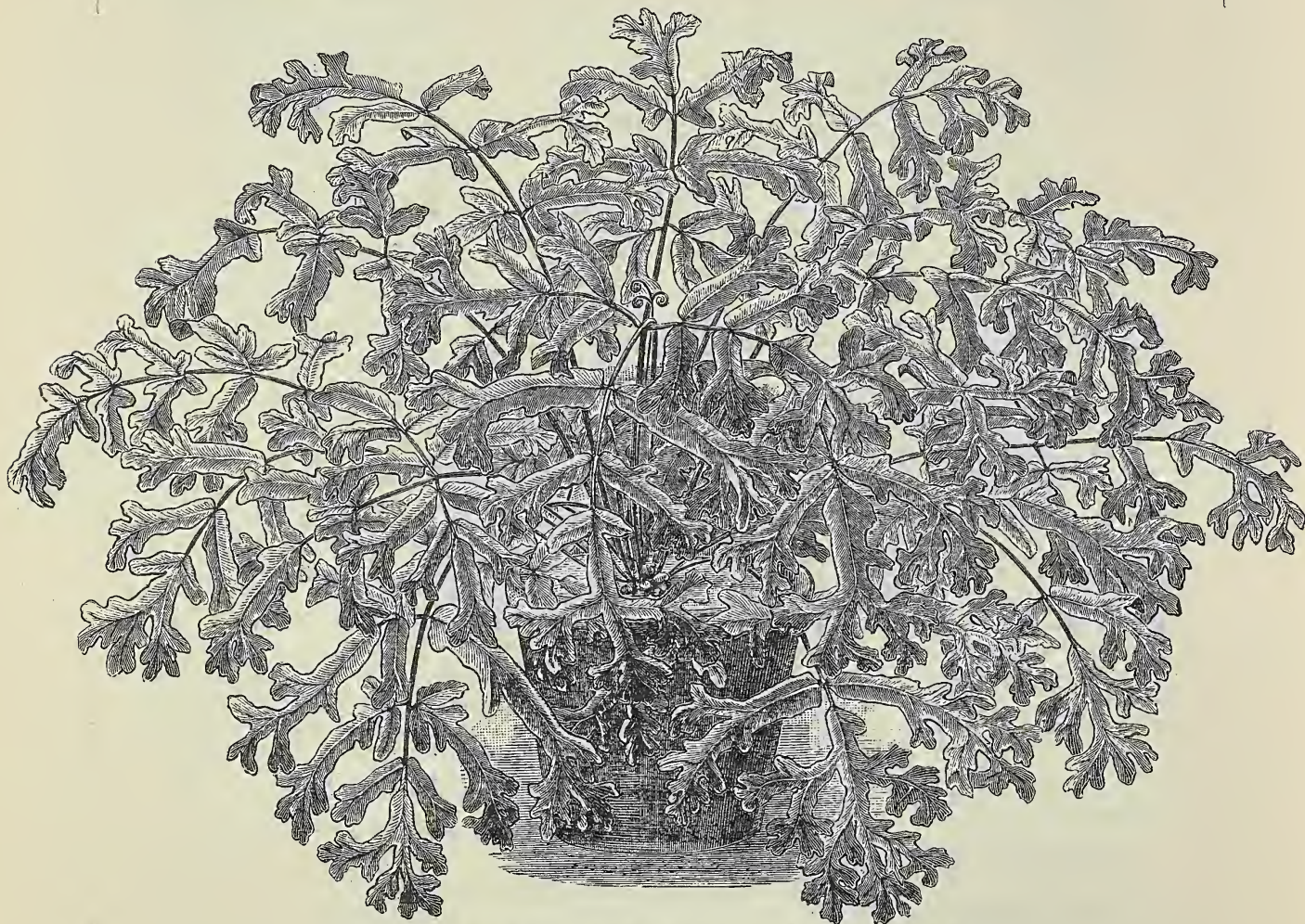
CORDIFOLIA, syn., <i>Ceratodactylis Osmundioides</i>	Mexico	s.	d.
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LOMARIOPSIS

HETEROMORPHA, syns., <i>Lomaria filiformis</i> , <i>L. propinqua</i> <i>Stenochlœna heteromorpha</i>	New Zealand	1	6
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LYCOPODIUM

COMPLANATUM	N. America	2	6
DENDROIDIUM	N. America	3	6
LUCIDULUM	N. America	2	6



OSMUNDA JAPONICA CORYMBIFERA

LYGODIUM (Climbing Ferns)

<i>α</i> JAPONICUM	Japan	1	0
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A free growing Fern, often misnamed *L. scandens*; requires wire, sticks, or other materials round which to twine for support. This loses its foliage in winter.

MICROPHYLLUM	Australia	2	6
PALMATUM	N. America	2	6

A beautiful species, with light green palmate pinnæ.

SCANDENS	India	3	6
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A handsome evergreen species, of free growth; foliage light green.

MARATTIA

ELEGANS	Cape Colony	6	
FRAXINIA SALICIFOLIA	S. Africa	3	

MICROLEPIA, syn., *Davallia*

	Average Height.							s.	d.
	feet.								
b HIRTA CRISTATA	...	2	...	...	South Sea Islands	...	2	6	

This beautiful crested Fern is from the South Sea Islands; it is of graceful character, and free habit of growth. The fronds droop in a charming manner, so that the plants form exceedingly beautiful objects for baskets.

PLATYPHYLLA, syns., Davallia p., D. lonchitidea	4	...	...	E. Indies	...	2	6
SCABRA, syns., Davallia s., D. villosa, D. marginalis	...	1½ ft.	...	Japan	...	2	6
SPELUNCLE	...	3	...	Tropics	...	3	6
STRIGOSA, syn., Davallia s.	...	1½	...	Japan	...	1	6

MOHRIA

CAFFRARIA	}	...	...	...	1	...	S. Africa	...	1	6
THURIFRAGA		...	...	...	...	...	...	...	3	6
ACHILLEFOLIA		...	...	...	4	...	...	...	...	...



PELLÆA ORNITHOPUS BRACHYPTERA.



PELLÆA TERNIFOLIA.

NEPHRODIUM

ATHAMANTICUM	...	...	...	2	...	S. Africa	...	2	6
CATOPTERON, syn., Lastrea c.	...	...	...	2	...	S. Africa	...	1	6
CHINENSIS	...	...	...	1	...	China	...	1	6
CUSPIDATUM, syn., Lastrea C.	...	...	...	1	...	India	...	2	6
CYATHEOIDES	...	...	...	3	...	Sandwich Islands	...	...	...
INÆQUALE, syn., Lastrea i.	...	...	...	2	...	S. Africa	...	...	...
c MOLLE, syn., Aspidium m.	...	...	...	2½	...	Tropics	...	0	6
— CORYMBIFERUM	...	...	...	1½	...	...	...	1	0
— POLYDACTYLUM	...	...	...	3	...	...	...	1	0
— SANGWELLII (F.C.C.)	...	...	...	2	...	Australia	...	2	6
ODORATUM	...	...	...	1	...	...	...	2	6
PENNIGERUM	...	...	...	2	...	...	...	1	6
RODIGASSIANUM	...	...	...	2	...	Samoa	...	2	6
RUPESTRIS	...	...	...	2½	...	...	...	1	6
SERRA	...	...	...	2	...	...	...	1	6
VELUTINUM	...	...	...	1	...	New Zealand	...	3	6

NIPHOBOLUS, syn., *Polypodium*

Chinensis	}	syn., Acrostichum l.	...	3	...	China	...	1	6
b c LINGUA		...	...	4	...	...	...	2	6
c — CORYMBIFERA		...	...	3	...	...	...	2	6
c RUPESTRIS	}	syn., Polypodium r.	...	1	...	Australia	...	2	6
serpens		...	...	6	...	Japan	...	3	6
TRICUSPE		...	...	1	...	W. Indies	...	1	6
VARIUS		...	...	4	...	...	...	...	...

NOTHOCLÆNA

					Average Height.							
					feet.						s.	d.
CANDIDA	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...
CRETACEA	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...
A very dwarf, but beautiful, Silver Fern, with triangular fronds.												
DEALBATA	...	...	...	...	$\frac{1}{4}$	...	...	N. America	...	...
GRAYII	...	...	...	...	$\frac{1}{4}$	...	...	N. America	...	...
HOOKEII	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...
HYPOLEUCA	...	...	...	...	$\frac{1}{2}$	...	...	Chili	...	...
LANUGINOSA	...	...	...	...	$\frac{1}{2}$	...	...	S. Europe	...	...
A rare species ; the fronds are light-coloured, soft, and very woolly.												
LEMMONII	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...
MARANTÆ, syn., Acrostichum m.	...	...	...	...	1	...	...	S. Europe	...	...	2	6
NEWBERRYII (F.C.C.)	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...	3	6
A beautiful species, covered with silvery tomentum.												
PARRYII	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	...
SINUATA (see Stove Ferns)	...	...	...	...	1	...	...	Mexico	...	...	2	6
A charming species, with long, narrow, drooping fronds.												



PLATYCERIUM ALCICORNE.

Platyceriums grow much better and show off their peculiar fronds to much greater advantage on blocks of wood than in pots.

ONOCLEA

<i>d</i> SENSIBILIS	}					2	...	...	N. America	...	1	0
<i>obtusiloba</i>		...	...	...	...			

ONYCHIUM

<i>capensis</i>	}					$1\frac{1}{2}$	...	...	Japan	...	1	0
<i>c</i> JAPONICUM								
<i>lucidum</i>												

OSMUNDA

JAPONICA CORYMBIFERA (see illustration)	...	1	Japan	2	6
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A distinct and pretty dwarf Fern, with crested fronds of light green.

JAVANICA	$1\frac{1}{2}$	Java	2	6
PALUSTRIS	...	...	...	...	2	...	...	Brazil	...	...	1	0

A handsome evergreen Fern, closely resembling our native Royal Fern in its style of growth, but more graceful, and does not grow so large ; its young fronds are produced nicely tinted, and it retains its foliage throughout the winter.

PELLÆA

ELLÆA				Average Height.									
				feet.									
ANDROMÆDIFOLIA	$\frac{1}{2}$	...	...	N. America	...	...	s. 2	d. 6	
ASPERA	$\frac{1}{3}$	...	...	N. America	...	...	
ATROPURPUREA, syns., Platyloma a., Pteris a	$\frac{3}{4}$	...	...	N. America	...	...	1	6	
BREWERII	$\frac{1}{2}$	...	...	N. America	...	...	
BRIDGESII, syn., Platyloma B.	$\frac{1}{2}$	...	...	California	...	...	2	6	
CALOMELANOS...	1	...	...	S. Africa	...	...	
DENSA	$\frac{1}{4}$	...	...	California	...	...	1	6	
GERANIIFOLIA, syns., Platyloma g., Pteris g.	$\frac{1}{2}$	...	...	E. Indies	...	...	1	6	
d GRACILIS	$\frac{1}{4}$	...	...	N. America	...	...	1	6	

**POLYSTICHUM ARISTATUM VARIEGATUM.****PELLÆA—Continued.**

c	INTRAMARGINALIS, syns., Cassebeera i., Cheilanthes i., Platyloma i., Pteris i., Pteris fallax	...	...	1	...	...	Mexico	...	...	1	0
	MARGINATA	...	...	$\frac{1}{2}$	...	...	N. America	...	...	...	...
d	ORNITHOPUS	...	...	$\frac{1}{2}$	...	...	California	...	...	2	6
	BRACHYPTERA	...	...	$\frac{1}{2}$	...	...	California	...	...	3	6
	PULCHELLA	...	...	$\frac{1}{2}$	...	...	N. America	...	...	...	...
b	TERNIFOLIA, syns., Platyloma t., Pteris t.	...	...	1	...	...	Trop. America	...	...	2	6
This is a beautiful species for either pot or basket, but particularly for the latter, its fronds being pendent.											
	WRIGHTIANA	...	...	$\frac{1}{2}$	...	...	N. America	...	...	2	6

PHEGOPTERIS

GERMANIANA...	...	...	1	...	...	Guadeloupe	...	...	...	...	...
TRICHODES, syns., Polypodium t., Polypodium tenericaule	...	...	3ft.	...	...	Malayan Archipel.	...	...	1	0	...

PLATYCERIUM

				Average Height.							
				feet.						s.	d.
ALCICORNE, syn.,	Acrostichum	a.	...	2	...	...	Malayan Archipel.	...	1	6	
MAJUS	...	...	...	1½	...	...	...	...	3	6	
WILLINCKII	...	...	...	1½	...	...	Java	...	10	6	

PLATYLOMA

CORDATA, syns.,	Pellaea c.,	Pteris sagittata,	Pellaea s.	1	...	Trop. America	...	2	6	
FALCATA, syns.,	Pellaea f.,	Pteris seticaulis		1	...	Australia	...	2	6	
<i>b</i> FLEXUOSA, syns.,	Pellaea f.,	Pteris f.	...	1	...	Trop. America	...	2	6	
ROTUNDIFOLIA, syns.,	Pellaea r.,	Pteris r.	...	¾	...	New Zealand	...	1	6	
CORDIFOLIA	...	...	...	1	...	...	...	1	6	



PLYOSTICHUM VIVIPARUM.

PLEOPELTIS

PERCUSSA, syns.,	Drynaria p.,	Phlebodium p.,	Polypodium p.,	P. cuspidatum	1	...	Trop. America	...	2	6
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PÆCILOPTERIS

FLAGELLIFERA, syn.,	Acrostichum	f.	...	2	...	E. Indies	...	2	6
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POLYPODIUM

<i>c</i> BILLARDIERII	} syns., {	Phymatodes B. Pleopeltis B.	}	1	...	N. Zealand	...	2	6
<i>diversifolium</i>									
<i>lepidopodium</i>									
<i>scandens</i>									
DREPANUM	...	...	...	2	...	Madeira	...	3	6
FALCATUM	...	...	...	1	...	N. America	...	1	6

POLYPODIUM—Continued.

					Average Height.							
					feet.						s.	d.
HASTATUM	...	...	...	...	$\frac{1}{2}$	...	...	China	...	...	1	6
INCANUM	...	...	...	...	$\frac{3}{4}$	...	...	Central America	...	...	2	6
KARWINSKIANUM	}	...	...	...	1	...	...	Mexico, Peru	...	...	1	6
PLEBEIUM		...	...	...					
RHAGADIOLEPIS	}	...	...	...	$\frac{1}{6}$	...	...	N. America	...	...
THYSSANOLEPIS		...	...	...					
SCHNEIDERII (new)	...	...	...	...	2	...	...	...	...	...	7	6
SCOULERII	...	...	...	...	1	...	...	N. America	...	...	2	6
UROPHYLLUM	...	...	...	...	2	...	...	India	...	...	3	6



PTERIS ARGYREA.

POLYSTICHUM, syn., *Aspidium*

ACROSTICHOIDES	...	...	...	...	$1\frac{1}{2}$	...	...	N. America	...	...	0	6
INCISUM	...	...	...	...	$1\frac{1}{2}$	...	...	N. America	...	...	1	6
AMABILE	}	...	...	...	$1\frac{1}{2}$	...	...	E. Indies	...	...	2	6
rhomboideum		...	...	...					
ARISTATUM, syn., Lastrea a.	...	...	...	...	1	...	...	Assam	...	...	1	0
VARIEGATUM, syn., Lastrea a. v.	...	...	...	...	1	...	...	Japan	...	...	1	0
This variety has a broad band of pale green running through the bases of the pinnules along the course of the rachis, and is thus very ornamental.												
CAPENSE, syn., Polypodium c.	}	...	...	...	2	...	...	S. Africa	...	...	1	6
coriaceum		...	...	...					
CONCAVUM, syn., Last. Standishii	...	...	...	...	2	...	...	Japan	...	...	2	6
CONIIFOLIUM	...	...	...	...	$1\frac{1}{2}$	...	...	E. Indies	...	...	2	6
DENTICULATUM	...	...	...	...	$1\frac{1}{4}$	...	...	Jamaica	...	...	3	6
FALCINELLUM	...	...	...	...	$1\frac{1}{2}$	...	...	Madeira	...	...	3	6
LENTUM	...	...	...	...	1	...	...	W. Indies	...	...	2	6
LEPIDOCAULON	...	...	...	...	$\frac{3}{4}$	...	...	Japan	...	...	2	6
MUCRONATUM	...	...	...	...	$\frac{3}{4}$	...	...	Jamaica	...	...	2	6
POLYBLEPHARUM	...	...	...	...	1	...	...	Japan	...	...	1	6
PROLIFERUM	...	...	...	...	2	...	...	Tasmania	...	...	2	6
PUNGENS	...	...	...	...	$1\frac{1}{2}$	...	...	S. Africa	...	...	3	6
RICHARDII	...	...	...	...	$\frac{3}{4}$	...	...	New Zealand	...	...

PTERIS—Continued.

				Average Height.								s.	d.
				feet.									
COMOSA, syn.,	Litobrochia	tripartita	...	3	...	...	E. Indies	...	...	1	6		
c	CRETICA	} pentaphylla	...	1½	...	...	Tropics	...	...	0	6		
c	CRETICA ALBA LINEATA		...	1	...	...	...	...	...	1	0		
—	CRISTATA	...	...	2	...	...	...	...	...	0	6		
—	DRINKWATERII	...	...	3	...	...	...	...	...	2	6		
—	MAGNIFICA	...	...	1½	...	...	...	...	...	1	0		
—	MAYII	...	...	1	...	...	...	...	...	1	6		
—	NOBILIS	...	...	1½	...	...	...	...	...	1	6		
—	SEMPERVIRENS	...	...	2	...	...	...	...	...	1	0		
CRISPA	} straminea	...	...	3	...	...	Chili	...	...	2	6		
GHIESBREGHTII		...	...	2	...	...	Mexico	...	...	2	6		
HASTATA, syns.,	Pellaea h.,	Platyloma h.	...	1½	...	...	S. Africa	...	...	1	0		
—	HASTÆFOLIA	...	...	¾	...	...	S. Africa	...	...	1	6		
HETERODACTYLE	...	...	...	2	...	...	...	...	...	1	6		



PTERIS CRETICA NOBILIS.

PTERIS HASTATA.
(From "The Book of Choice Ferns.")

HETEROPHYLLA	...	...	...	1	...	...	W. Indies, Brazil	...	...	1	0
INTERNATA	...	...	...	1	...	...	...	...	...	2	6
KINGIANA	...	...	...	2	...	...	Norfolk Island	...	...	1	6
LEPTOPHYLLA, syn.,	Litobrochia l.	...	...	1½	...	...	Brazil	...	...	1	6
LONGIFOLIA	} costata ensifolia vittata	...	...	3	...	...	Tropics	...	...	1	0
—		MARIESII	...	1	...	...	Japan	...	...	1	6
MACILENTA		...	...	1½	...	...	New Zealand	...	...	3	6
MOLLUCCANA		...	...	4	...	...	Malay Islands	...	...	1	6
NEMORALIS	...	...	...	2	...	...	Tropics	...	...	1	6
—	VARIEGATA	...	...	...	...	...	...	...	...	1	6
OUVRARDII	...	...	...	2½	...	...	...	...	...	1	0
QUADRIAURITA	...	...	...	3	...	...	E. Indies	...	...	2	6
REGINÆ	...	...	...	1½	...	...	...	...	...	2	6
—	CRISTATA	...	...	1½	...	...	...	...	...	2	6

PTERIS—Continued.

Average Height.

CHARACTERS—Continued.						Average Height, feet.				s.	d.
b c	SCABERULA	...	...	...	...	$\frac{3}{4}$	...	...	N. Zealand	...	1 6
A most beautiful Fern, with creeping rhizomes, from which spring very finely divided fronds, of great beauty. Very suitable for baskets, rockwork, or pots.											
	SEMIPINNATA	}	...	...	...	3	...	...	China	...	1 0
	dimidiata										
	flabellata										
c	SERRULATA	...	...	...	...	1½	...	...	Tropics	...	0 6
c	CRISTATA	...	...	...	...	1	...	...	...	...	0 6
	COMPACTA	...	...	...	...	1	...	...	...	...	1 6
	DENSA	...	...	...	...	1	...	...	...	...	1 6



PTERIS SERRULATA CRISTATA COMPACTA.

SERRULATA CRISTATA GRACILIS	...	...	1	...	...	...	...	...	...	1 6
PARVULA	...	...	1	...	...	...	...	...	...
PLUMOSA	...	...	1½	...	...	...	...	...	...	1 6
MAJOR	...	...	3	...	...	...	...	...	...	3 6
CRISTATA	...	...	3	...	...	...	...	...	...	3 6
GLORIOSA	...	...	2	...	...	...	...	...	...	3 6
TREMULA	...	...	3	...	...	N. Zealand	...	...	...	0 6
CRISPA	...	...	2	...	...	...	...	...	...	1 0
ELEGANS	...	...	...	...	...	...	...	...	...	2 6
FLACCIDA	...	...	2	...	...	...	...	...	...	1 0
SMITHIANA	...	...	2	...	...	...	...	...	...	2 6
TRIPARTITA	...	...	2	...	...	Polynesia	...	...	...	1 6
UMBROSA	...	...	2½	...	...	Australia	...	...	...	1 6
UNDULATA	...	...	3	...	...	...	...	...	...
VICTORIÆ	...	...	1	...	...	...	...	...	...	2 6
WALLICHIANA	...	...	2	...	...	Himalayas	...	...	...	1 6
WIMSETTII	...	...	1½	...	...	...	...	...	...	1 0

SADLERIA (Tree Ferns)*Average Height.*
feet.

s. d.

CYATHEOIDES (see illustration)	S. Sea Islands	...
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SCHIZEA

PUSILLA	$\frac{1}{2}$	N. America
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SCOLOPENDRIUM

KREBSII, syns., Lomaria Australis, L. densa	1 $\frac{1}{2}$	S. Africa
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PTERIS TREMULA SMITHIANA

STRUTHIOPTERIS, syn., *Onoclea*

d GERMANICA (The Ostrich Feather Fern)	...	2	Europe...	1	0
--	-----	---	-----	-----	-----------	-----	-----	---	---

A handsome free-growing species; does well in a cold house.

d JAPONICA	}	1 $\frac{1}{2}$	Japan	2	6
ORIENTALIS												

PENNSYLVANICA	3	N. America	1	6
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RECURVA	2	3	6
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TODEA, syn., *Leptopteris* (Filmy Ferns) *Average Height.*

										s.	d.
AFRICANA	}	(not a Filmy Fern)...	...	1½	S. Africa	2	6
Australasica											
BARBARA											
FRASERII	...	...	...	1½	...	...	Australia	...	...
GRANDIPINNULA	...	...	...	2	...	...	...	...	...
A new variety of great beauty.											
<i>hymenophylloides</i>	}	...	...	1½	...	...	N. Zealand	...	...	1	6
c PELLUCIDA											



SADLERIA CYATHEOIDES.

TODEA—Continued.

c SUPERBA	1	...	N. Zealand	3	6
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It is impossible to do justice to this species by description, it must be seen in its loveliness to be appreciated and enjoyed. The fronds grow from 18 to 24 inches long, most gracefully curved; the segments are very crowded, and instead of the usual flat growth of other kinds, they are so much turned upwards as to give the fronds a rich moss-like character, deep green in colour. This species and the preceding will all grow well in a ferncase, or in a cold greenhouse. To preserve their beauty, it is necessary to keep them in a cool, damp, shady situation.

— PLUMOSA	...	...	...	...	2	...	...	...	...	...	...
VROOMII (not a Filmy Fern)	...	...	...	...	2½	...	Australia	...	...	...	...
WILKESIANA	...	...	...	...	2	...	Fiji Islands	...	...	...	...

TRICHOMANES (Filmy Ferns)

Average Height.

					feet.					s.	d.
ALABAMENSIS ...	...	...	...	...	$\frac{1}{2}$	...	...	Alabama	...	5	0
ALATUM	}	...	...	...	$\frac{1}{2}$	...	...	W. Indies	...	5	0
ATTENUATUM		...	...	...	$\frac{1}{2}$	...	...	Tristan d'Acunha	...	7	6
ANGUSTATUM ...	...	...	...	...	$\frac{1}{2}$	...	...	Japan, Java	...	7	6
AURICULATUM...	...	...	...	...	$\frac{1}{4}$	...	...	New Zealand...	...	10	6
COLENSOII ...	...	...	...	...	$\frac{1}{4}$	...	...	W. Indies	...	...	...
CRINITUM ..	...	...	...	...	1	...	...	W. Indies	...	21	0
CRISPUM ...	...	...	...	...	$\frac{1}{2}$	...	...	Chili ..	...	7	6
EXSECTUM ...	...	...	...	...	$\frac{1}{3}$	...	...	Philippines	...	...	...
FENICULACEUM ..	...	...	...	...	$\frac{1}{6}$	...	...	New Zealand	...	3	6
HUMILE ...	...	...	...	...	1	...	...	West Indies	...	10	6
KAULFUSSII ...	...	...	...	...	...	...	...	Brazil	...	...	...
LUSCHNATHIANUM	...	...	...	...	1	...	...	...	...	7	6
----- PROLONGUM	...	...	...	...	1	...	...	...	...	7	6
----- PULCHRUM	...	...	...	...	1	...	...	...	...	7	6



TODEA PELLUCIDA.



TODEA SUPERBA.

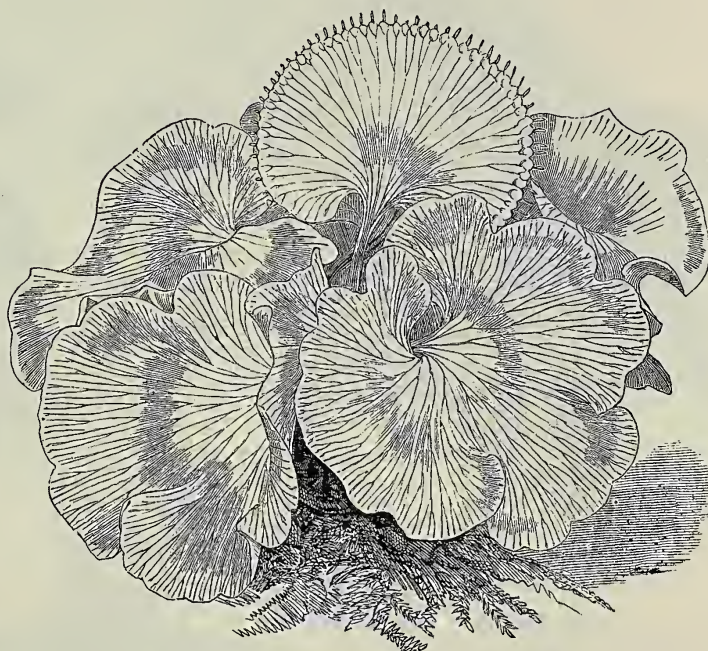
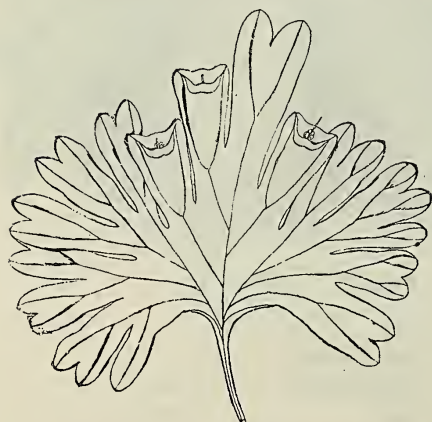
TRICHOMANES—Continued.

LYALLII	...	...	...	...	$\frac{1}{12}$	...	...	New Zealand...	...	...	...
MAXIMUM	...	...	...	...	1	...	...	Java, Borneo...	...	10	6
----- UMBROSUM	...	...	...	...	1	...	...	Java	...	10	6
MEIIFOLIUM	...	...	...	...	$1\frac{1}{2}$	...	...	Java	...	...	...
MEMBRANACEUM	...	...	...	...	$\frac{1}{12}$	...	...	Trop. America	...	10	6
PARVULUM	...	...	...	...	$\frac{1}{12}$	...	...	Java	...	10	6
PETERSII	...	...	...	...	$\frac{1}{12}$	...	...	N. America	...	10	6
PINNATUM	...	...	...	...	$\frac{1}{2}$	...	...	Trop. America	...	10	6
PRIEURII	...	...	...	...	1	...	...	West Indies	...	...	...
PYXIDIFERUM...	...	...	...	...	$\frac{1}{2}$	...	...	West Indies	...	7	6
c RADICANS	...	...	...	...	1	...	...	Europe	...	3	6
----- AMERICANA	...	...	...	...	$\frac{3}{4}$	...	...	N. America	...	5	0
c ----- ANDREWSII	...	...	...	...	$\frac{3}{4}$	...	...	...	...	5	0
----- CAMBRICUM	...	...	...	...	$\frac{3}{4}$	...	...	Wales	...	5	0
----- CRISPUM	...	...	...	...	$\frac{3}{4}$	...	...	...	...	3	6
----- CRISPA RAMOSUM	...	...	...	...	$\frac{3}{4}$	...	...	...	...	5	0

TRICHOMANES—*Continued.*

TRICHOMANES—Continued.						Average Height.				s.	d.		
						feet.							
RADICANS DILATATUM						...	...	...	1	...	...	5	0
———DISSECTUM						...	...	...	$\frac{3}{4}$	...	...	3	6
—————CUNEATUM						...	...	...	$\frac{3}{4}$	...	...	7	6
c	RENIFORME					...	...	...	$\frac{3}{4}$	...	New Zealand...	10	6
RIGIDUM						...	...	...	1	...	S. Africa	10	6
————STRICTUM						...	...	...	$\frac{3}{4}$	...	New Zealand	10	6
SCANDENS						...	...	...	1	...	W. Indies	7	6
SPECIOSUM						...	...	...	$\frac{1}{2}$	...	Madeira	5	0
SPICATUM						...	...	...	$\frac{1}{3}$	...	W. Indies	10	6
TENERUM						...	...	...	$\frac{1}{3}$	...	Mexico to Peru	7	6
TRICHOIDIUM						...	...	...	$\frac{1}{4}$	...	W. Indies	10	6
c	VENOSUM					...	...	...	$\frac{1}{6}$	...	New Zealand	5	0

These, and all other Filmy Ferns, must be kept in a cool, shady situation and a moist atmosphere.



TRICHOMANES RENIFORME.

TRICHOMANES PARVULUM.

VITTARIA

LINEATA	$\frac{1}{5}$	N. America
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WOODSIA

ALPINA	}	$\frac{1}{4}$	Europe	3	6
HYPERBOREA												
GLABELLA	$\frac{1}{2}$	N. America	2	6
<i>d</i> ILVENSIS, syn., Acrostichum i.				...	$\frac{1}{3}$	Europe	1	0
<i>d</i> MEXICANA	...	...	...	...	1	...	...	Mexico	...	...
MOLLIS	...	...	...	...	1	...	...	Mexico	...	...
<i>d</i> OBTUSA	}											
FERRINIANA		1	N. America	1	0

WOODSIA—Continued.

Average Height.

					feet.					s.	d.
<i>d</i>	OREGANA	...	...	...	$\frac{1}{2}$	...	...	N. America	...	2	6
	POLYSTICHOIDES VEITCHII	...	...	...	$\frac{1}{3}$	...	...	Japan	...	2	6
<i>d</i>	SCOPULINA	...	...	...	$\frac{1}{2}$	...	...	N. America	...	2	6

WOODWARDIA

<i>Fortunei</i>	}	...	...	...	2	...	...	Japan	...	1	0
ORIENTALIS	}	...	...	...		...	...
JAPONICA, syn., Blechnum J.		...	...	...	$1\frac{1}{2}$	...	...	Japan	...		
<i>b</i>	RADICANS	...	...	...	3	...	...	S. Europe	...	1	6
A splendid large-growing Fern, produces long drooping fronds; very suitable for baskets.											
—	AMERICANA	...	...	...	2	...	...	N. America	...	2	6
—	BURGESSIANA	...	...	...	2	...	...	...	...	2	6
—	CRISPA	...	...	...	2	...	...	...	...	1	6
<i>b</i>	— CRISTATA	...	...	...	$1\frac{1}{2}$	...	...	...	...	2	6

SELAGINELLAS.

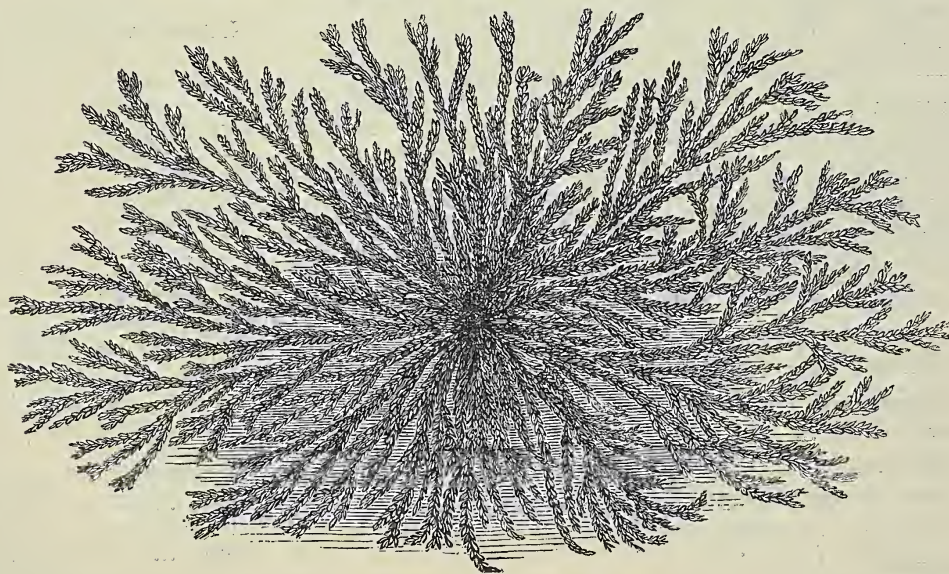
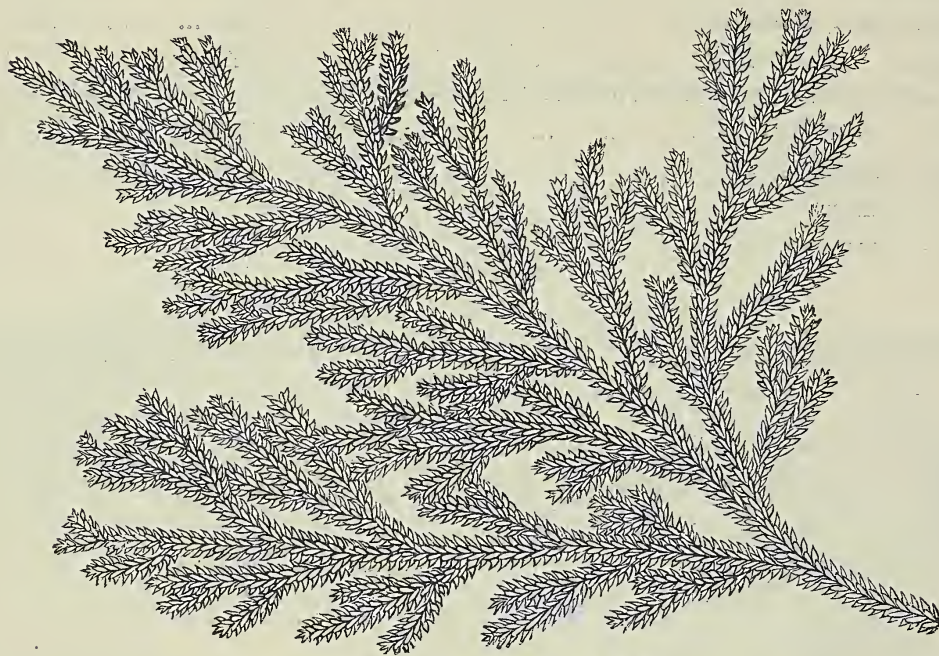
Average Height.

					feet.					s.	d.
<i>c</i>	<i>apus</i>	}	...	...	$\frac{1}{2}$	...	...	N. America and Brazil	...	0	6
<i>c</i>	DENSA	}	...	...	$\frac{1}{2}$	...	...	...	...	0	6
—	ELEGANS		...	...	$\frac{1}{2}$	...	...	...	...	0	6
<i>c</i>	BROWNII	}	...	...	$\frac{1}{6}$	...	...	Azores...	...	0	6
<i>c</i>	BRUNONII	}	...	...	$\frac{1}{6}$	...	...	...	...	0	6
	CALIFORNICA		...	...	$\frac{1}{3}$	...	...	California	...	1	6
	CAULESCENS ARGENTEA	}	...	...	1	...	...	Colombia	...	1	0
	UMBROSA	}	...	...		...	...
	CIRCINALIS	}	...	...	1	...	...	Trop. America	...	1	6
	CUSPIDATA	}	...	...		...	...
<i>c</i>	DELICATISSIMA		...	...	$\frac{1}{6}$	...	...	Colombia	...	1	0
<i>c</i>	DENTICULATA	}	...	...	$\frac{1}{6}$	...	...	Europe	...	0	6
<i>c</i>	helvetica	}	...	...	$\frac{1}{6}$	...	...	...	...	1	0
	DIVARICATA		...	...	$\frac{1}{2}$	...	...	...	...	1	0
	DOUGLASSII		...	...	$\frac{1}{2}$	...	...	N. America	...	1	0
	INVOLVENS (see illustration)...		...	...	$\frac{1}{3}$	...	...	India	...	2	6
<i>c</i>	JAPONICA	}	...	...	$\frac{1}{2}$	...	...	Japan	...	1	0
	conferta	}	...	...		...	...
<i>c</i>	KRAUSSIANA	}	...	...	$\frac{1}{6}$	...	...	Cape Colony, Azores...	...	0	6
<i>c</i>	hortensis	}	...	...		...	...
This variety is commonly, though erroneously, named <i>denticulata</i> .											
<i>c</i>	KRAUSSIANA AUREA		...	...	$\frac{1}{6}$	...	...	...	...	0	6
—	VARIEGATA		...	...	$\frac{1}{6}$	...	...	...	...	0	6
	MARTENSII	}	...	...	$\frac{3}{4}$	...	...	Mexico...	...	0	6
	formosa	}	...	...		...	...
	MARTENSII VARIEGATA		...	...	$\frac{3}{4}$	...	...	...	...	1	0

SELAGINELLAS—Continued.

Average Height.

					feet.					s.	d.
OREGANA	...	...	...	...	$\frac{1}{4}$	...	...	N. America	...	1	6
PATULA	}	...	...	...	$\frac{1}{6}$	...	...	Jamaica	...	1	0
SARMENTOSA		...	...	...	$\frac{1}{6}$	...	...	Azores...	...	0	6
c POULTERII	...	...	...	...	$\frac{1}{6}$	...	...	E. Indies	...	1	6
PUBESCENS	}	...	...	...	1	...	...		
Wildenovii		...	...	...				



SELAGINELLA INVOLVENS.

STANSFIELDII...	...	...	...	...	$\frac{1}{6}$	...	...	...	...	0	6
c STOLONIFERA	...	...	...	...	$\frac{3}{4}$	...	...	Mexico...	...	0	6
c VARIABILIS	}	...	...	...	$\frac{1}{6}$	...	...	Jamaica	...	0	6
c mutabilis		...	...	...	$\frac{1}{6}$	...	...		
c SERPENS		...	...	...				

See remarks at the beginning of Stove Ferns.

Many of the following species and varieties, though sufficiently hardy to grow outside in many parts of the country, are pretty for Greenhouse cultivation also, doing better in than out of doors ; but when grown outside those marked with an asterisk (*) should be protected in winter by having something put over the crowns, such as old fronds or soft hay, pegged down to prevent its being blown about.

Average Height.

<i>d Americanum</i>	}	feet.	N. America	s.	d.
PEDATUM		21½	1	0	

<i>d</i> ACROSTICHOIDES	$\frac{1}{2}$	N. America	1	6
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	CRISTATUM, syn., Lastrea c.	1	N. America	1	0
	CLINTONIANUM, syn., Lastrea c. C.	3	N. America	1	6
	FRAGRANS, syn., Lastrea f.	$\frac{1}{2}$	N. America
<i>d</i>	NEVADENSE, syn., Lastrea N.	$1\frac{1}{2}$	Nevada
<i>d</i>	NOVEBORACENSIS, syn., Lastrea N...	$1\frac{1}{2}$	N. America	1	0
	RIGIDUM ARGUTUM	N. America	1	6
	SPINULOSUM var. BOOTHII, syn., Lastrea s. B.	$2\frac{1}{2}$	N. America	1	6
<i>d</i>	THELYPTEROIDES, syn., Lastrea t.	$1\frac{1}{2}$	N. America	1	0



ADIANTUM PEDATUM.



ALLOSORUS ACROSTICHOIDES.

<i>d</i> ANGUSTIFOLIUM	...	...	...	...	1	...	...	N. America	...	...	1	6
EBENEUM	}	...	...	...	1	...	...	N. America	...	...	1	0
<i>polypodioides</i>												
*FONTANUM	...	...	...	...	$\frac{1}{2}$	...	...	Europe	...	...	1	6
<i>d</i> THELYPTERIDES, syn., Diplazium t.	...	...	...	...	$1\frac{1}{2}$	...	...	N. America	...	...	1	0
—— CRISTATUM	...	...	...	...	1	...	...	N. America	...	...	...	...

FILIX-FEMINA AMERICANUM	2	N. America	2	6
<i>d</i> MICHAUXII, syn., Asplenium M.	1½	N. America	1	0

<i>d</i> VIRGINICUM	$\frac{3}{4}$	N. America	1	6
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*CARYOTIDIUM	1	E. Indies	1	0
*FALCATUM	1½	Japan	1	0
*FORTUNEI	}	1½	Japan	1	0
<i>orientalis</i>		1½	Japan	1	0

CYSTOPTERIS

POLYPTERIS					Average Height.						
					feet.					s.	d.
d	BULBIFERA	syns.	Aspid. b.	Polypodium b.	1	...	...	N. America	...	1	0
d	FRAGILIS	(American variety)	...	...	$\frac{3}{4}$	...	...	N. America	...	1	0
	TENUIS	...	...	...	$\frac{1}{2}$	...	...	N. America	...	1	6

DENNSTÆDTIA, syns., *Dicksonia*, *Sitolobium*

d	PUNCTILOBULA	syns.	{	Dicksonia p.	}	2	...	...	N. America	...	1 0
				D. pilosiuscula	}						

LASTREA, syn., *Nephrodium*

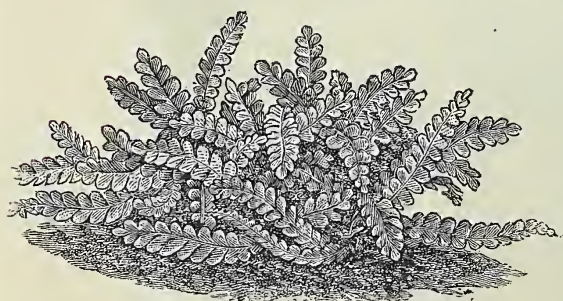
*ATRATA	syn.,	Cyrtomium a.	...	...	2	...	...	India	...	1 0
d	DECURRENS	}	syn.,	Polypodium d. p.	2	...	...	Japan...	...	1 0
*decursive-pinnata										
FRAGRANS	...	...	...	...	$\frac{1}{2}$	...	...	N. America	...	

A very pretty dwarf, violet-scented Fern.

d	GOLDIANA	syn.,	Nephrodium G.	...	2 $\frac{1}{2}$	...	...	N. America	...	1 6
d	INTERMEDIA	...	...	...	1 $\frac{1}{2}$	...	...	N. America	...	1 0
	MARGINALE	...	...	...	1 $\frac{1}{2}$	...	...	N. America	...	1 0
*OPACA	...	...	...	...	2	...	...	China	...	1 0
*PROLIFICA	...	...	...	...	1	...	...	Jamaica	...	1 0
*SIEBOLDII	}	syn.,	Pycnopteris S...	...	2	...	...	Japan	...	1 0
podophylla										
*VARIA	...	...	...	...	2	...	...	China	...	1 0



ASPLENIUM FONTANUM.



LOMARIA ALPINA.



ONOCLEA SENSIBILIS.

LOMARIA

ALPINA	}	...	...	...	...	$\frac{1}{2}$	...	...	N. Zealand	...	1 0
antarctica											
CHILENSIS	...	...	...	...	...	3	...	...	Chili	...	2 6

LYGODIUM

PALMATUM	N. America	...	2 6
----------	-----	-----	-----	-----	-----	-----	-----	-----	------------	-----	-----

ONOCLEA

d	SENSIBILIS	}	2	N. America	...	1 0
	obtusiloba										

A very handsome free-growing species.

OSMUNDA

				Average Height.								s.	d.
				feet.									
d	CINNAMOMEA	...	...	2½	...	...	N. America	...	...	2	6		
d	CLAYTONIANA	}	...	2½	...	...	N. America	...	...	2	6		
	<i>interrupta</i>		...	...	...	...	...	...	...	...	...
d	GRACILIS	}	...	2½	...	...	N. America	...	...	1	6		
	<i>spectabilis</i>		...	...	...	...	...	...	...	...	...

PELLÆA

*ATROPURPUREA, syns., <i>Platyloma a.</i> , <i>Pteris a.</i>				¾	...	...	N. America	...	...	1	6		
d	*GRACILIS	...	...	¼	...	...	N. America	...	...	1	6		

PHEGOPTERIS

ALPESTRE	...	...	...	1	...	...	N. America	...	...	2	6		
d	DRYOPTERIS, syn., <i>Polypodium d.</i>	...	...	½	...	...	N. America	...	...	1	0		
d	HEXAGONOPTERA, syn., <i>Polypodium h.</i> (see illustration)	1ft.	...	...	...	...	N. America	...	...	1	0		
d	POLYPODIOIDES, syn., <i>Polypodium phegopteris</i>	1	...	...	...	...	N. America	...	...	1	0		

**OSMUNDA CINNAMOMEA.**

This is a fine strong growing species, sending up its fertile fronds distinct from the sterile, and is in other respects very different from the British *Osmunda regalis*.

**OSMUNDA CLAYTONIANA.**

This is undoubtedly the most handsome form of this genus in cultivation, the fronds having a beautiful velvety appearance, being *interrupted* (hence its synonym *interrupta*) by the seed vessels coming between the sterile pinnæ attached to the rachis.

POLYSTICHUM, syn., *Aspidium*

ACROSTICHOIDES	...	...	...	1½	...	...	N. America	...	...	0	6		
—	GRANDICEPS...	...	...	...	...	...	N. America	...	...	...	...
—	INCISUM	...	...	1½	...	...	N. America	...	...	1	6		
BRAUNII, syn., <i>Aspid. aculeatum</i> var. <i>Braunii</i>	2	...	...	...	...	...	N. America	...	...	2	6		
CONCAVUM, syn., <i>Lastrea Standishii</i>	...	2	...	...	...	...	Japan	...	...	2	6		
MUNITUM	...	...	...	4	...	...	California	...	...	2	6		

This is a fine vigorous Holly-fern like variety, very hardy.

—	IMBRICANS	...	...	1	...	...	N. America	...	...	2	6		
POLYBLEPHARUM	...	...	...	2	...	...	Japan	...	...	2	6		
*PROLIFERUM	...	...	...	2	...	...	Tasmania	...	...	2	6		
*SETOSUM	...	...	...	2	...	...	Japan	...	...	0	6		

STRUTHIOPTERIS, syn., *Onoclea*

Average Height.

		feet.				s.	d.
d	GERMANICA (The Ostrich Feather Fern) ...	2	...	...	Europe	1	0
d	*ORIENTALIS } ...	1½	...	...	Japan	2	6
d	Japonica } ...	3	...	...	N. America	1	6
	PENNSYLVANICA ...	2	...	...	N. America	3	6
	PENNSYLVANICA RECURVA ...						

A very distinct variety, with the foliage recurved ; awarded F.C.C. by the R.H. Society.



OSMUNDA GRACILIS.

This is a beautiful variety, being somewhat like *O. regalis*, but much more graceful (hence its name), the young fronds also sometimes come up tinted.



PHEGOPTERIS HEXAGONOPTERA.



STRUTHIOPTERIS GERMANICA.



WOODSIA OBTUSA.



WOODSIA HYPERBOREA.

WOODSIA

WOODSIA					Average Height.								s.	d.		
					feet.											
ALPINA					}	...	...	...	...	1/4	...	...	N. America	...	...	3 6
hyperborea																
GLABELLA					...	...	...	...	...	1/2	...	...	N. America	...	...	2 6
d	ILVENSIS				...	...	...	...	...	1/3	...	...	Europe...	...	...	1 0
d OBTUSA					}	...	...	...	...	1	...	...	N. America	...	...	1 0
d perriniana																
d	OREGANA				...	...	...	...	...	1/2	...	...	N. America	...	...	2 6
d	SCOPULINA				...	...	...	...	...	1/2	...	...	N. America	...	...	2 6

WOODWARDIA

<i>d</i> ANGUSTIFOLIA	}	syn., Lorinseria	...	...	1 $\frac{1}{4}$	...	...	N. America	...	...	1	0
<i>d</i> areolata												
*JAPONICA	...	...	...	...	1 $\frac{1}{2}$	...	...	Japan	...	...	...
*Fortunei	}	...	...	...	2	...	...	Japan	...	...	1	0
ORIENTALIS												
RADICANS	...	...	...	...	3	...	...	S. Europe	...	...	1	6
———— AMERICANA	...	...	...	...	2	...	...	N. America	...	...	2	6
<i>d</i> VIRGINICA, syn., Anchistea V.	...	...	...	...	2	...	...	N. America	...	...	1	6

SELAGINELLA

DOUGLASSI	...	...	...	...	...	...	...	...	...	N. America	...	...	1 0
OREGANA	...	...	...	...	...	...	...	...	...	Oregon	...	...	1 6

BRITISH FERNS.

The initials or names in brackets indicate the authorities for the names given to the plants. The abbreviations represent as follow: (B.) Barnes; (D.) Drury; (J.) Col. Jones; (L.) Lowe; (M.) Moore; (S.) Stansfield; (W.) Wollaston.

The Ferns marked with an asterisk (*) are not suitable for outside cultivation, except in specially favourable situations. They are better cultivated in greenhouse or frame, and should be protected from frost.

F.C.C. indicates that the Ferns so marked have been awarded First Class Certificates by the Royal Horticultural Society, London.

ADIANTUM (Maiden-hair Fern)

				Average Height.								s.	d.
				feet.									
*CAPILLUS VENERIS	0	6
*— CORNUBIENSE (M.)	2	6
*— DAPHNITES (L.)	1	6
*— GRANDE	2	6
*— IMBRICATUM	3	6
*— MAGNIFICUM (Fraser)	2	6

ALLOSORUS (Cryptogramme)

d CRISPUS (Mountain Parsley Fern)	0	6
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ASPLENIUM

ADIANTUM NIGRUM (Black Maiden-hair Spleenwort)	$\frac{3}{4}$	0	6
*_____ ACUTUM	$\frac{3}{4}$
*_____ GRANDICEPS (W.)	1	6
*_____ MICRODON	$\frac{3}{4}$	...	...	...	...	...	...	...	...
ALTERNIFOLIUM } (Alternate leaved Spleenwort). See illustration.									
GERMANICUM }					$\frac{1}{2}$ ft.	...	...	...	3 6
*LANCEOLATUM (Lanceolate Spleenwort)	$\frac{1}{2}$	...	...	...	...	...	...	1	0
*_____ MICRODON (M.)	1	...	...	...	...	...	...	...	...

A distinct hybrid, awarded a F.C.C. by the R. H. Society.



ALLOSORUS CRISPUS.



ASPENIUM NIGRUM GRANDICEPS.



ASPENIUM TRICHOMANES.



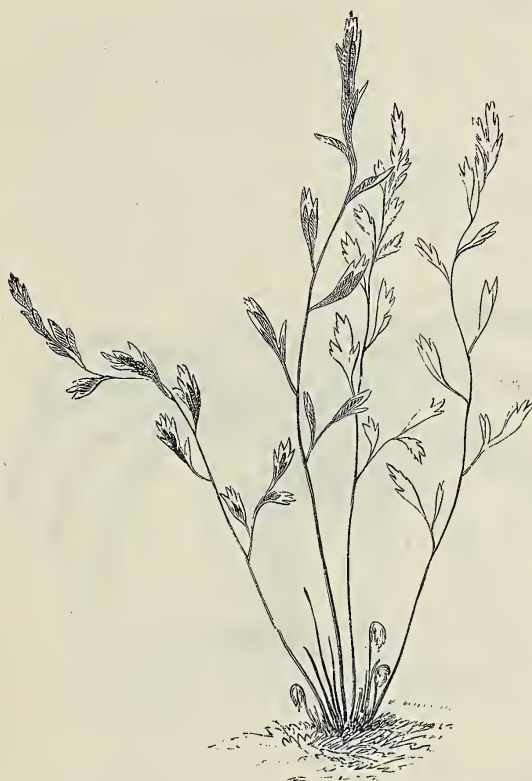
ALLOSORUS CRISPUS.



ASPENIUM TRICHOMANES CRISTATUM.

ASPLENIUM—Continued.

					Average Height.					s.	d.
					feet.						
*MARINUM (Sea Spleenwort)	...	...	...	...	1	...	...	...	...	1	0
*IMBRICATUM (L.)	...	...	...	...	1	...	...	...	...	1	6
*PLUMOSUM (W.)	...	...	...	...	1	...	...	...	...
RUTA-MURARIA (Rue leaved Spleenwort, or Rue Fern)					$\frac{1}{3}$	...	...	...	...	0	6
SEPTENTRIONALE (Forked Spleenwort)	...	...			$\frac{1}{2}$	...	...	...	...	1	6
TRICHOMANES (Black stemmed Spleenwort)	...	...			$\frac{1}{2}$	...	...	...	...	0	6
*CONFLUENS (M.)	...	...	...	...	$\frac{3}{4}$	...	...	...	...	7	6
CRISTATUM (M.)	...	...	...	...	$\frac{1}{4}$	...	...	...	...	1	6
INCISUM (M.)	...	...	...	...	$\frac{1}{2}$	...	...	...	...	2	6
MOULEI (M.)	...	...	...	...	$\frac{1}{4}$	...	...	...	...	1	6
TROGYENSE	...	...	...	...	$\frac{1}{3}$	...	...	...	...	1	6
VIRIDE (Green stemmed Spleenwort)	...	...	...	...	$\frac{1}{2}$	...	...	...	...	1	0



ASPLENIUM GERMANICUM.



ASPLENIUM SEPTENTRIONALE.

d **ATHYRIUM** (Lady Fern) (These are all deciduous)

FILIX-FEMINA	...	...	...	...	2	...	...	...	...	0	6
ACROCLADON (M.)	...	...	...	...	1	...	...	...	...	3	6
ANGUSTIFRONS...	...	...	...	...	2	...	...	...	...	1	6
APICALE (M.) (see illustration)	...	...	...	...	$\frac{3}{4}$	...	...	...	...	5	0
A dwarf crested variety, and one of considerable beauty. It grows about 9 inches high, the fronds ending in a cristate head of curled segments.											
APPLEBYANUM	...	...	...	...	$1\frac{1}{2}$	...	...	...	...	2	6
BLAKE	...	...	...	...	2	...	...	...	...
CAPITATUM	...	...	...	...	1	...	...	...	...	1	6
CAUDIGERUM (B.)	...	...	...	...	2	...	...	...	...	2	6
CLARISSIMA (J.)	...	...	...	...	2	...	...	...	...
CONGESTUM	...	...	...	...	$\frac{3}{4}$	...	...	...	...	1	6
CRISTATUM (W.)	...	...	...	...	$\frac{1}{2}$	...	...	...	...	1	6

ATHYRIUM—Continued.

Average Height.

							s.	d.
FILIX-FÆMINA GIRDLESTONEII CRISTATUM (Birkenhead) 1ft. ...							2	6
GRANDICEPS (Birkenhead) 1½ ...							3	6
A distinct, pretty, depauperated, crested variety. F.C.C.								
GLOMERATUM (M.) ... 1½ ...							2	6
GRACILLIMUM (M.) ... 2 ...							2	6
GRANDICEPS (M.) ... 1½ ...							1	6
GRANTÆ (M.) ... 1½ ...							2	6
CONGESTUM PAUL (W.) } ... 1½ ...							2	6
HOWARDÆ (M.) ... 1½ ...							1	6
IVERYANUM ... 2 ...							2	6
KALOTHRIS (L.) ... 1 ...							2	6
A beautiful variety, with pale-green, finely-cut fronds.								
KILMORYENSIS ... 1½ ...							1	6
MINIMUM							1	0
MOOREII ... 1 ...							1	6
MULTIFIDUM (M.) ... 2 ...							1	0
PLUMOSUM ... 2½ ...							3	6
AXMINSTER (J.) } 2½ ...							1	6
AXMINSTERENSE (L.) } ...							5	0
BARNESII (W.) ... 2 ...							5	0
DIVARICATUM (M.) ... 3 ...							3	6
ELEGANS (Parsons) ... 2 ...							3	6
A most lovely variety, finely cut, plumose, and specially attractive.								
HORSFALL (M.) ... 3 ...							3	6
JONESII (J.) ... 2 ...							3	6
MULTIFIDUM (S.) ... 2 ...							2	6
A very handsome variety, heavily crested, and plumose.								
SUPERBUM (D.) ... 2 ...							1	6
POLYDACTYLUM (M.) ... 1½ ...							2	6
PRINCEPS (B.) ... 1 ...							3	6
PRITCHARDII (S.) ... 1½ ...							3	6
CRISTATUM (S.) ... 1 ...							1	6
PULCHERRIMUM (J.) ... 1 ...							2	6
RAMO-CRISTATUM ... 1½ ...							2	6
REGALE (B.) (F.C.C.) ... 2 ...							1	6
SETIGERUM (W.) ... 2 ...							2	6
CAPITATUM (Birkenhead) 1 ...							2	6
CRISTATUM (J.) ... 1½ ...							2	6
CORYMBIFERUM (Birkenhead) 1½ft. ...							5	0
GRANDICEPS (Birkenhead) 1¼ft. ...							2	6
A lovely variety, finely divided, bristly, and beautifully crested. F.C.C.								
SETIGERUM VICTORIÆ (Birkenhead) 1¼ ...							2	6
SIMPSONII (S.) } ½ ...							1	6
CONGESTUM SIMPSON (J.) } ...							3	6
SMITHII (L.) } 2 ...							2	6
PLUMOSUM SMITH (J.) } ...							1	6
STIPATUM (M.) } 1½ ...							3	6
CONGESTUM PAUL (J.) } ...							2	6
THYSSANOTUM ... 2 ...							1	6
TODEOIDES (S.) ... 2 ...							3	6
VELUTINUM (S.) ... ½ ...							1	6
VERNONÆ (Jervis) ... 1½ ...							1	6

A choice and pretty variety

ATHYRIUM—Continued.

Average Height.

	feet.	s.	d.
FILIX-FEMINA VERNONÆ CORYMBIFERUM ...	$\frac{1}{2}$...	2	6
----- CRISTATUM...	$\frac{1}{2}$...	1	6
----- POLYDACTYLUM (Birkenhead) $\frac{1}{2}$...	$\frac{1}{2}$...	2	6
----- VICTORIÆ (M.) ...	2 ...	2	6

A very handsome, distinct variety.

BLECHNUM

<i>boreale</i> } (The hard Fern) ...	$\frac{1}{4}$...	0	6
SPICANT }			
----- AITKENIANUM (M.) ...	$\frac{1}{2}$...	2	6
----- APICULATUM (M.) ...	$\frac{1}{4}$...	2	6
----- CONCINNUM (D.) }	$\frac{1}{2}$...		
----- DRUERYII (L.) }			
----- CONTRACTUM ...	$\frac{3}{4}$...	1	6
----- CRISPUM (B.) ...	1 ...	2	6
----- CRISTATUM (M.) }	1 ...	2	6
----- RAMOSUM (Kinahan) }			
----- IMBRICATUM (M.) ...	$\frac{1}{2}$...	2	6
----- LINEARE (B.) ...	$\frac{1}{3}$...	2	6
----- MAUNDERII ...	$\frac{1}{2}$...		
----- MULTIFIDUM (B.) ...	$\frac{3}{4}$...		



BLECHNUM SPICANT TRINERVIA-CORONANS.



CETERACH OFFICINARUM.

----- PLUMOSUM (B.) }			
----- SERRATUM, AIREY'S No.1 (W.) }	$1\frac{1}{2}$...	3	6
----- TRIPINNATUM (L.) }			
----- PROJECTUM (M.) ...	$\frac{1}{2}$...	1	6
----- RAMOSUM ...	$\frac{3}{4}$...	2	6
----- SERRATUM, AIREY'S No.2 (W.) }	1 ...	2	6
----- AIREYI (L.) }			
----- STRICTUM (Frances) ...	$\frac{1}{2}$...	2	6
----- TRINERVIA-CORONANS (M.)	2	6

BOTRYCHIUM

LUNARIA (The Moon Wort) ...	$\frac{1}{2}$...		
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CETERACH

OFFICINARUM (The Scaly Spleenwort) ...	$\frac{1}{3}$...	0	6
----- CREMATUM ...	$\frac{1}{2}$...	1	0

								s.	d.
FRAGILIS (The Bladder Fern) syn. Polypodium f.		$\frac{1}{2}$	0	6
----- DICKIEANA		$\frac{1}{2}$	1	6
----- GRACILIS		$\frac{3}{4}$	1	6
----- SEMPERVIRENS		$\frac{1}{2}$	1	6
MONTANA (The Mountain Bladder Fern)	...	$\frac{1}{2}$	2	6
REGIA } Alpina }	(The Alpine Bladder Fern)	$\frac{1}{8}$	2	6

<i>cupressiforme</i>	} (The Tunbridge Filmy Fern)	$\frac{1}{4}$	1	6
*TUNBRIDGENSE										
*WILSONII	} (Wilson's Filmy Fern)	...	$\frac{1}{6}$	1	0
UNILATERALE										

LASTREA, syn., *Nephrodium*

ÆMULA	} (The Hay-scented Buckler Fern)	1½	...	...	...	...	...	...	0	6	
<i>Fœnisecii</i>											
RECURVA											
ÆMULA CRISTATA (J.)	...	...	...	...	1	...	...	...	...	2	6
———— DENSE (Birkenhead)	...	...	...	...	1	...	...	...	...	5	0
DILATATA (The Broad Buckler Fern)	...	...	...	...	2	...	...	...	...	0	6
———— CRISPA	...	...	...	...	1½	...	...	...	...	2	6
———— CRISPATO-CRISTATA (J.)	...	...	...	...	2	...	...	...	...	1	6
———— CRISTATO-GRACILE (J.)	}	...	...	...	2	...	...	...	...	1	6
———— CRISTATA ROBERTS (W.)		...	...	...	...	...	...	...	...	...
———— GRANDICEPS (B.)	...	...	...	...	1½	...	...	...	...	1	6
———— LEPIDOTA (M.)	...	...	...	...	1	...	...	...	...	1	6
———— SPECTABILE (L.)	...	...	...	...	2	...	...	...	...	2	6

FILIX-MAS } The Male Fern.—There are three distinct forms of this Fern, all indiscriminately
PROPINQUA } called "The Male Fern." On examination, the distinctive characters of each are
PSEUDO-MAS } very apparent.

Prospinqua: The fronds are pale green, but not so bright as the preceding, and it has a softer feel with it. The fronds also die down sooner.

Pseudo-mas: This is a very handsome form. Its habit of growth is so symmetrical as to suggest the idea of a shuttlecock. Its fronds at their bases, and for some distance up, are thickly covered with rich brown scales. It is of a more leathery texture than the others, and of a deeper green. It not infrequently, when undisturbed for years, produces a stem like a dwarf Tree-Fern, and we have possessed plants with fronds 6ft. high.

FILIX-MAS ...	...	...	...	...	2	...	...	...	...	...	0	6
BARNESII (M.)	...	...	...	...	2 $\frac{1}{2}$	...	...	...	...	...	1	0
BELPERII (L.)	...	...	...	...	1 $\frac{1}{2}$	...	...	...	...	...
BOLLANDIÆ (M.)	} ...	...	...	...	2 $\frac{1}{2}$	...	...	...	...	...	2	6
PLUMOSA (W.)												
CONCINNA (Moule)	...	...	...	...	1 $\frac{1}{2}$	...	...	...	...	...	2	6
CRONKLEYENSE (L.)	...	...	...	...	1	...	...	...	...	...	1	6
DECORA ...	...	...	...	...	1 $\frac{1}{2}$	...	...	...	...	...	2	6
DEPAUPERATA (Padley)	...	...	...	...	2	...	...	...	...	...	2	6
DIGITATO-JONESII (B.)	} ...	...	...	...	2	...	...	...	...	...	1	6
DIGITATA (L.)												
FLUCTUOSA (M.)	...	...	...	...	2	...	...	...	...	...	1	6
CRISTATA	...	...	...	...	1	...	...	...	...	...
CRISPATISSIMA (W.)	...	...	...	...	2	...	...	...	...	...	1	6

LASTREA—Continued.

				Average Height.					s. d.	
				feet.						
FILIX-MAS	GRACILE (J.)	...	...	1½	...	...	...	...	...	2 6
—	GRANDICEPS (Sim)	...	...	3	...	...	...	...	...	1 6
—	INGRAMII	...	...	2½	...	...	...	...	...	2 6
—	IVERYANA (M.)	...	...	2	...	...	...	...	...	1 6
—	LINEARE (W.)	...	...	2	...	...	...	...	...	1 6
—	PUMILA (M.)...	...	...	1	...	...	...	...	...	2 6
—	RETICULATA...	...	...	2	...	...	...	...	...	2 6
—	TYERMANNII	...	...	2	...	...	...	...	...	1 6
PROPINQUA (W.), syn., ABBREVIATA	...	...	...	2	...	...	...	...	...	1 0
—	CRISTATA (M.)...	...	...	2	...	...	...	...	...	2 6
—	GRANDICEPS (B.)	...	...	1	...	...	...	...	...	2 6
—	PRODUCTA	...	...	1½	...	...	...	...	...	2 6
—	PULCHELLA	...	...	1½	...	...	...	...	...	2 6



LASTREA PSEUDO-MAS CRISTATA FIMBRIATA.

PSEUDO-MAS (W.)	FILIX-MAS PALEACEA (Don)	3	...	...	...	...	...	...	1 0
—	CONCHATA	1½	...	...	...	...	...	...	2 6
—	CRISPA (B.)	1	...	...	...	...	...	...	1 6
—	CRISTATA	1	...	...	...	...	...	...	1 6
—	ANGUSTATA	1	...	...	...	...	...	...
—	GRACILE (Lyell)	1	...	...	...	...	...	...	1 6
—	POLYDACTYLA	1½	...	...	...	...	...	...	3 6
—	CRISPULA	2	...	...	...	...	...	...	1 0

LASTREA—Continued.

				Average Height.				s. d.	
				feet.					
PSEUDO-MAS CRISTATA (M.)	...	...	...	2½	...	...	...	0	6
————— ANGUSTATA (M.)	...	...	...	2½	...	...	...	1	6
————— FIMBRIATA (Cropper)	}			1½	...	...	...	1	6
————— PLUMOSISSIMA (L.)									

A very handsome variety, fimbriated, crested, much lighter in appearance than *cristata*, and more compact in habit. It is one of the prettiest British Ferns, and makes a good house plant. F.C.C.

PSEUDO-MAS PLUMOSISSIMA NOVE	...	...	...	1	...	...	...	...	...
————— CROUCHII	...	...	...	1½	...	...	...	1	6
————— PENDENS	...	...	...	1½	...	...	...	1	6
————— PINDERII (M.)	...	...	...	2	...	...	...	1	6
————— POLYDACTYLA (Dadds)	...	...	...	2	...	...	...	1	6
————— MAPPLEBECK	...	...	...	3	...	...	...	2	6
————— WILLS	...	...	...	3	...	...	...	1	6
————— RAMO-CRISTATA (J.)	...	...	...	2½	...	...	...	1	6
————— RAMOSISSIMA (M.)	...	...	...	2	...	...	...	5	0
————— RAMULOSISSIMA (W.)	...	...	...	½	...	...	...	...	...
————— STABLERII (M.)	...	...	...	3	...	...	...	1	6

MONTANA } (The Mountain Buckler Fern), syns., Polypodium m., Polypodium o. ... 0 6
oreopteris }

————— BARNESII (M.)... 1½ ... 3 6

A new and very pretty variety, the fronds much narrower than in the type.

————— CONGESTA (B.)	...	...	...	½	...	...	...	3	6
————— CORONANS (M.) (F.C.C.)	...	...	...	1½	...	...	...	3	6
————— CRISTATA (W.)	...	...	...	1½	...	...	...	2	6
————— RAMO-CORONANS (B.) (F.C.C.)	...	...	...	1½	...	...	...	...	...

REMOTA (M.) ... 1 ... 5 0

RIGIDA (The rigid Buckler Fern) ... 1 ... 1 0

SPINULOSA ... 1½ ... 0 6

d THELYPTERIS } (The Marsh Fern), syn., Polypodium t. 1½ ... 1 0
palustris }



OSMUNDA REGALIS.



OSMUNDA REGALIS CRISTATA.

OPHIOGLOSSUM

VULGATUM (The Adder's Tongue) ... ½ ...

OSMUNDA

d REGALIS (The Royal Fern) ... 3 ... 1 0

d REGALIS CRISTATA ... 2 ... 1 6

————— UNDULATA ... 3 ...

Average Height.

			Average Height.			s.	d.
			feet.				
ACULEATUM POLYDACTYLUM	2					2	6
----- PULCHERRIMUM (J.)	2½					7	6
----- SCOPE (L.)	1					3	6
ANGULAR (The soft Prickly Shield Fern)	2					0	6
----- ACUTILOBUM (W.)	2					2	6
----- FOXH	2					1	6
----- CAPITATUM	1						
----- CRISTATUM (Birkenhead) 1½						1	6
----- CRUCIATUM	1						
----- VIVIPARUM (Mrs. Grant) 1½							



POLYPODIUM VULGARE CAMBRICUM.



POLYPODIUM VULGARE TRICHOMANOIDES.



POLYSTICHUM ACULEATUM.

ANGULARE BAYLIE (M.)...	...	...	1 $\frac{1}{2}$	...	...	...	...	...	1	0
———— CONGINNUM (M.) ...	...	...	2	...	...	...	...	...	...	...
———— CONGESTUM (W.) ...	...	...	1	...	...	...	...	...	2	6
———— GRANDICEPS ...	...	...	1	...	...	...	...	...	...	...
———— POLYDACTYLUM ...	...	...	$\frac{3}{4}$	...	...	...	...	...	3	6
———— CRISTATO-GRACILE GRAYII ...	...	...	1 $\frac{1}{2}$	...	...	...	...	...	1	6
———— JACKSON (J.)...	...	...	1 $\frac{1}{2}$	...	...	...	...	...	1	6

POLYSTICHUM—Continued.

Average Height.

			feet.							s.	d.
ANGULARE CRISTATO JONESII	...	...	1½	...	...	...	...	...	...	2	6
———— CRISTATUM (M.)	...	...	1½	...	...	...	...	...	...	1	6
———— BARNESII	...	...	1½	...	...	...	...	...	...	2	6
———— MAJUS (B.)	...	...	2	...	...	...	...	...	...	2	6
———— WOLLASTON'S No. 10	...	...	1½	...	...	...	...	...	...	2	6
———— CRUCIATUM CAUDATUM	...	...	1½	...	...	...	...	...	...
———— DECOMPOSITUM FRONDOSUM (L.)	...	...	2	...	...	...	...	...	...	1	6
———— DIVISILOBUM (Senex)	...	...	1½	...	...	...	...	...	...	1	6
———— ACUTUM No. 1 (J.)	...	...	1½	...	...	...	...	...	...	2	6
———— CRISTATUM (L.)	...	...	1½	...	...	...	...	...	...	2	6
———— DECORUM (J.)	...	...	2	...	...	...	...	...	...	3	6
———— DENSUM (J.)	...	...	2	...	...	...	...	...	...	3	6
———— LAXUM (J.)	...	...	2	...	...	...	...	...	...	3	6
———— PLUMOSUM	...	...	2	...	...	...	...	...	...	5	0
———— PLUMOSISSIMUM (Birkenhead)	...	...	1½	...	...	...	...	...	...

One of the most lovely ferns in existence.



POLYSTICHUM ANGULARE GRANDICEPS.



POLYSTICHUM LONCHITIS (The Holly Fern).

———— FRONDOSUM (J.)	...	...	2	...	...	...	...	...	...	1	6
———— FOLIOSO-CRISPUM (J.)	...	...	1½	...	...	...	...	...	...	3	6
———— MULTIFIDUM (J.)	...	...	2	...	...	...	...	...	...	3	6
———— GRACILE (W.)	...	...	1	...	...	...	...	...	...	2	6
———— GRANDICEPS (M.)	}		1½	...	...	...	...	...	...	2	6
———— TALBOT (W.)											
———— GRANDIDENS (L.)	...	...	1	...	...	...	...	...	...	1	6
———— IMBRICATUM (Ivery)	...	...	1	...	...	...	...	...	...	2	6
———— (J.)	...	...	1½	...	...	...	...	...	...	3	6
———— INCISUM	...	...	1	...	...	...	...	...	...	1	0
———— LINEARE (M.)	...	...	1½	...	...	...	...	...	...	2	6
———— LONGIPINNULUM	...	...	1	...	...	...	...	...	...	3	6
———— LYALLII	...	...	½	...	...	...	...	...	...	3	6
———— MULTILOBUM (W.)	...	...	2	...	...	...	...	...	...	3	6
———— DECORUM	...	...	1½	...	...	...	...	...	...	3	6
———— OVALE	...	...	1½	...	...	...	...	...	...	3	6

Average Height.
feet.

<i>XYSTICHUM—Continued.</i>						<i>Average Height.</i>	s.	d.
							feet.	
ANGULARE MULTILOBUM DENSUM (J.)	1½	...	...	...	...	...	3	6
----- PENDENS (Birkenhead)	1½	...	...	...	...	...
----- REVOLVENS (J.)	2	...	...	...	...	...	2	6
----- PARVISSIMUM (M.)... ..	½	...	...	...	...	...	1	6
----- PATEYII (L.)	1½	...	...	...	...	...	3	6
----- PERSERRATUM (W.)	1½	...	...	...	...	...	1	6
----- PLUMOSO-DIVISILOBUM GRACILE (L.)	2	...	...	...	...	...
----- TENUÆ (Fox)	1	...	...	...	...	...	3	6
----- PLUMOSUM (W.)	2	...	...	...	...	...	2	6
----- MOLYI	2	...	...	...	...	...	5	0
----- PERFECTUM	2	...	...	...	...	...	3	6
----- POLYDACTYLUM (J.)	1½	...	...	...	...	...	2	6
----- (W.)	1½	...	...	...	...	...	1	6
----- PROLIFERUM (M.)	2	...	...	...	...	...	1	0
----- CRAWFORDIANUM (J.)	2	...	...	...	...	...	1	6
----- DENSUM	1	...	...	...	...	...	1	0
----- HENLEYÆ (M.)	1½	...	...	...	...	...	1	0
----- WOLLASTONII (M.) }	2	...	...	...	...	...	1	6
----- ACUTILOBUM WOLLASTONII (L.) }								



SCOLOPENDRIUM
VULGARE.



SCOLOPENDRIUM VULGARE COOLINGII.



SCOLOPENDRIUM
VULGARE CRISPUM.

ANGULARE REMOTO-DECURRENTES (Moly)		...	1	2	6
----- ROTUNDATUM (M.)	2	2	6
----- STIPITATUM (M.)	1	2	6
----- TRIPPINATUM PADLEY (J)		...	1½	2	6
----- TALBOT	1½	2	6
----- ELEGANS	1½	2	6
----- VENUSTUM (M.)	2	2	6
----- CRISTATUM	1½	2	6
----- WAKELEYANUM (M.)	1½	2	6
LONCHITIS (The Holly Fern)	1	1	6

<i>d</i>	ALPESTRE, syn., Polypodium a...	1	1	6
—	FLEXILE	1	2	6

[illegible]

SCOLOPENDRIUM

		Average Height.							s.	d.
		feet.								
VULGARE (The Hart's Tongue Fern) ...	...	1	...	...	...	...	...	...	0	6
----- CAPITATUM (Atkinson) ...	...	$\frac{3}{4}$	...	...	...	...	...	...	2	6
----- COCHLEATUM MULTIFIDUM (L.) ...	...	1	...	...	...	...	...	...	2	6
----- CONGLOMERATUM (Ward) ...	...	$\frac{3}{4}$	...	...	...	...	...	...	2	6
----- CONGREGATUM (L.) ...	...	$1\frac{1}{2}$	...	...	...	...	...	...	2	6
----- CONTRACTUM ...	...	$\frac{1}{2}$	...	...	...	...	...	...	1	6
----- COOLINGII (L.) ...	...	$\frac{1}{2}$	...	...	...	...	...	...	2	6
----- CORNICULATUM (L.) ...	...	1	...	...	...	...	...	...
----- CORNUTUM ...	...	$\frac{3}{4}$	...	...	...	...	...	...	1	6
----- CRISPUM (Gray) ...	...	1	...	...	...	...	...	...	1	0
----- BOWDONII ...	...	$1\frac{1}{2}$	...	...	...	...	...	...	2	6
----- COWBURNII (L.) ...	...	2	...	...	...	...	...	...	3	6
----- CRISTATUM (Padley) ...	...	1	...	...	...	...	...	...	2	6
----- FERTILE (Fox) ...	...	1	...	...	...	...	...	...	2	6
----- FIMBRIATUM (S.) ...	...	1	...	...	...	...	...	...	3	6

A very handsome variety. The edges are deeply frilled and fimbriated.



SCOLOPENDRIUM VULGARE CRISPUM FIMBRIATUM.

VULGARE CRISPUM JONES (L.) ...	...	2	...	...	...	...	...	...
----- MAJUS ...	...	2	...	...	...	...	...	...	2	6
----- MAXIMUM ...	...	2	...	...	...	...	...	...	3	6
----- MURICATUM ...	...	1	...	...	...	...	...	...
----- ROBUSTUM (J.) ...	...	2	...	...	...	...	...	...	2	6
----- STABLERÆ (L.) ...	...	2	...	...	...	...	...	...	2	6
----- WILLS (L.) ...	...	2	...	...	...	...	...	...	3	6
----- CRISTATUM (M.) ...	...	$\frac{1}{2}$	...	...	...	...	...	...	2	6
----- CRISTULATISSIMUM ...	...	$\frac{3}{4}$	...	...	...	...	...	...
----- CRISTULATUM (Cropper) ...	...	1	...	...	...	...	...	...	2	6
----- DENSUM (L.) ...	}	$\frac{1}{3}$ ft.	...	...	...	...	...	...	1	6
----- CONGLOMERATUM DENSUM KELWAY (J.) ...			...	...	...	...	...	...

The most dense variety of this family in cultivation; the fronds being small, dense, and crested, form plants almost like round green balls.

SCOLOPENDRIUM—Continued.

										Average Height.	
										feet.	
VULGARE DIGITATUM (W.)	...	...	...	...	...	...	...	...	...	1½	s. d. 1 6
----- MAJUS	...	...	...	...	...	...	...	...	...	1	3 6
----- ENDIVÆFOLIUM (W.)	}	...	...	...	...	...	...	...	...	1	1 6
----- LACERATUM (M.)		...	...	...	...	...	...	...	...	1	1 6
----- EXOMARE (L.)	...	...	...	...	...	...	...	...	...	1	1 6
----- FISSUM (L.)	}	...	...	...	...	...	...	...	...	1	1 6
----- CRISPO-FISSUM (B.)		...	...	...	...	...	...	...	...	1	1 6
----- GRANDICEPS (J.)	...	...	...	...	...	...	...	...	...	1	1 6
----- KELWAYII (L.)	...	...	...	...	...	...	...	...	...	½	1 6
----- KERATOIDES (L.)	...	...	...	...	...	...	...	...	...	1	1 6
----- MARGINATUM (M.)	...	...	...	...	...	...	...	...	...	1	2 6
----- MULTICEPS	...	...	...	...	...	...	...	...	...	1	2 6
----- TENUÆ (M.)	...	...	...	...	...	...	...	...	...	1	1 6
----- MOONÆ (L.)	...	...	...	...	...	...	...	...	...	...	2 6



SCOLOPENDRIUM VULGARE CRISTULATUM.

VULGARE MULTIFIDUM	...	...	...	...	1	...	...	...	...	...	1 6
----- MURICATO-MARGINATUM (L.)	}	...	...	...	1	...	...	...	...	...
----- RUGOSO-MARGINATUM (W.)		...	...	...	1	...	...	...	...	...
----- MURICATUM BLANDUM (L.) (F.C.C.)	...	...	...	...	1	...	...	...	...	...
----- CRISTATUM (J.)	...	...	...	...	1	...	...	...	...	...	2 6
----- SUPERBUM (L.) (F.C.C.)	...	...	...	...	1	...	...	...	...	...
----- NEPENTHESOIDES (L.) (F.C.C.)	...	...	...	...	...	...	...	...	...	...
----- PERAFERENS ROSETTUM (L.) (F.C.C.)	...	...	...	...	...	...	...	...	...	...
----- RAMO-CRISTATUM (Clapham)	...	...	...	...	¾	...	...	...	...	...	2 6
----- MAJUS (J)	...	...	...	...	1½	...	...	...	...	...	3 6

A grand variety, raised by the late Col. Jones. It has bold, heavily-crested fronds, and makes a fine specimen.

SCOLOPENDRIUM—Continued.

POLOPENDRIUM— <i>Continued.</i>				Average Height.								
				feet.							s.	d.
VULGARE	RAMO-DIGITATUM	(Bolton)	...	1	...	...	...	...	...	...	1	6
—	RAMO-MARGINATUM	(Clapham)	...	1	...	...	...	...	...	...	2	6
—	RAMOSISSIMUM	(L.) (F.C.C.)	...	...	...	...	...	...	...	...	2	6
—	RUGOSA SPIRALE	(L.)	...	...	...	...	...	...	...	...
—	SAGITTATO CRISTATUM	(Clapham)	...	1	...	...	...	...	...	...
—	SCALARIFORME	...	...	$\frac{1}{2}$	...	...	...	...	...	...	3	6

SCOLOPENDRIUM VULGARE
RAMO-CRISTATUM MAJUS (JONES).SCOLOPENDRIUM VULGARE
RAMO-MARGINATUM.

SCOLOPENDRIUM VULGARE SCALARIFORME.

VULGARE	SUPRALINEATUM	...	...	1	...	...	...	...	...	2	6
—	MURICATUM	...	...	1	...	...	...	...	...	2	6
—	UNDULATUM	...	...	1	...	...	...	...	...	1	6
—	COCHLEATUM	(L.)	...	...	...	...	...	...	...
—	VELOISII	(M.)	...	...	...	...	...	...	...	2	6

WOODSIA

ALPINA	}	...	...	...	...	$\frac{1}{3}$	...	...	...	...	3	6
HYPERBOREA		...	...	...	...		...	...	...	...
ILVENSIS	...	...	...	...	...	$\frac{1}{2}$	...	...	...	...	1	0

STOVE AND GREENHOUSE FERNS AND SELAGINELLAS IN COLLECTIONS.

W. and J. BIRKENHEAD'S Selection.

						£	s.	d.	
100	Plants in 100 different species and varieties, W. & J. B.'s selection					2	10	0	and upwards.
100	Do.	50	do.	do.	do.	1	10	0	do.
50	Do.	50	do.	do.	do.	1	1	0	do.
50	Do.	25	do.	do.	do.	0	15	0	do.
25	Do.	25	do.	do.	do.	0	7	6	do.
12	Do.	12	do.	do.	do.	0	3	0	do.

The prices here quoted are very low, and are for small healthy plants; at higher prices we can supply larger plants and choicer kinds.

HARDY EXOTIC AND BRITISH FERNS IN COLLECTIONS.

W. and J. BIRKENHEAD'S Selection.

						£	s.	d.	
100	Plants in 100 Species and Varieties, W. & J. Birkenhead's selection,					3	15	0	and upwards.
100	Do.	50	do.	do.	do.	2	5	0	do.
50	Do.	50	do.	do.	do.	1	5	0	do.
50	Do.	25	do.	do.	do.	0	17	6	do.
25	Do.	25	do.	do.	do.	0	8	6	do.
12	Do.	12	do.	do.	do.	0	3	0	do.

When a large collection is required, irrespective of number of varieties, we will quote special price on application; and when choicer kinds or larger plants are required than could be included in collections at above prices, we shall be pleased to supply them at proportionately higher rates.

HARDY FERNS FOR ROCKERIES.

We have an immense number of the commoner and most easily grown British Ferns in the open ground, of which we can supply STRONG WELL-ROOTED PLANTS in 6 of the larger, and, if desired, 4 of the smaller growing species, at 20/- per hundred; extra strong, 30/- and 40/- per hundred.

N.B.—Much disappointment is experienced by those who are tempted to purchase recently collected plants because offered at low prices; these in many cases are almost destitute of roots, and are often very small, as a consequence of which they do very little good for a long time, and often do not grow at all. It is far better to pay a little more and have such plants as are offered above, which are certain to give satisfaction.

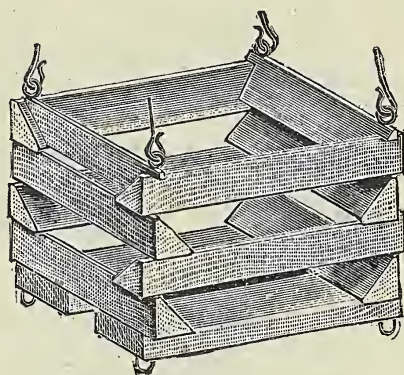
COMPOST RECOMMENDED FOR BRITISH FERNS.

BOTRYCHIUMS	}	strong fibrous loam.
OPHIOGLOSSUMS		
ATHYRIUMS	}	strong fibrous loam, leaf mould, sand.
BLECHNUMS		
LASTREAS	}	strong fibrous loam, leaf mould, sand, and a little peat.
POLYSTICHUMS		
OSMUNDAS		—loam and peat principally, a little leaf mould and sand added.
HYMENOPHYLLUM		—loam, leaf mould, peat, and broken sandstone.
ALLOSORUS		—loam, with broken slate or grit, and a little leaf mould.
ASPLENIUMS	}	loam, peat, leaf mould, sand, and a little old mortar broken small.
CYSTOPTERIS		
SCOLOPENDRIUMS		
CETERACH		

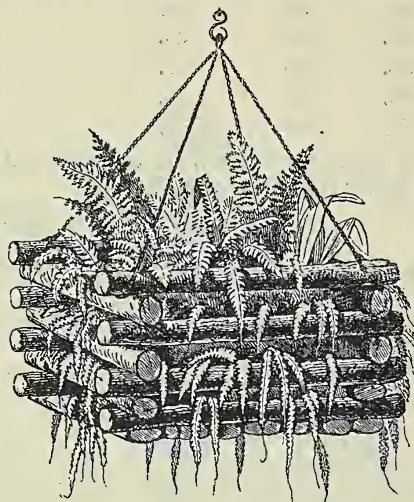
All the Compost should be light and open. The addition of a little old mushroom manure, or a reasonable quantity of cow manure, dried and rubbed fine, is of great benefit to all Hardy Ferns.

HANGING BASKETS.

These can be supplied in different shapes and of various materials, and when planted with one or more Ferns make beautiful ornaments, and are a great acquisition to the Fernery. We can supply them planted, according to the size, with one or more Ferns, &c., or unplanted if preferred.



WEST'S PATENT ORCHID
OR FERN BASKET.



[HANGING BASKET WITH FERNS.

The sizes and prices are as below, according to number and variety of Ferns, &c., used :—

*Square, unplanted	6 inches, 1s. 0d. ...	8 inches, 1s. 3d. ...	9 inches, 1s. 6d. ...	10 inches, 1s. 9d.,
Planted with 1 or more Ferns ..	2s. 6d. ...	3s. ...	3s. 6d. ...	4s. 6d.
Galvanised Wire (Round) 9 inches, 9d. ...	10 inches, 10d. ...	11 inches, 1s. 0d. ...	12 inches, 1s. 3d.	
Planted	1s. 6d. ...	2s. 0d. ...	2s. 6d. ...	3s. 6d.

*Teak Wood Baskets for Orchids. Prices per dozen on application.

FERN COMPOST.

COMPOST, prepared expressly for Ferns and Selaginellas, consisting of leaf mould, loam, and sand in their proper proportions, ready for use, we supply at 1s. 6d. per bushel.

A better compost for the choicest varieties, containing *silver* sand, charcoal, leaf-mould, peat and loam, we supply at 2s. per bushel. Filmy Fern Compost, specially prepared, 2s. 6d. per bushel.

PEAT, the best quality, 3s. per bushel.

LEAF MOULD, of best quality, 2s. 6d. per bushel.

LOAM, good and suitable for Ferns, 1s. 6d., 2s. per bushel.

SILVER SAND, COARSE (which is better than the fine for Ferns), 3s. 6d. per bushel.

CHARCOAL, 2s. per bushel.

GREEN MOSS, 2s. 6d. per bushel.

SPHAGNUM MOSS, 3s. 6d. per bushel.

When supplying the above, we charge 6d. each for sacks, and we allow full price for them if returned to us in good condition, *carriage paid*, within one month.

If any other article is required, not mentioned in this list, please communicate with us, and, if possible, we shall have pleasure in supplying it.

FERN SEED.

Choice Mixed Stove and Greenhouse Varieties	1s., 2s. 6d., and 5s. per packet.
„ „ Hardy Exotic and British Varieties	1s., 2s. 6d., and 5s. „ „

BLOCKS OF VIRGIN CORK PLANTED WITH FERNS FOR SUSPENDING.

This is a novelty introduced by us and universally admired. In place of the stiff wire baskets we use pieces of cork, which, planted with ferns in a particular way, not only look more natural and more ornamental, but so planted we find many ferns to grow more satisfactorily.

We can supply many varieties planted as above, suitable for stove, greenhouse, and dwelling-house cultivation, at 1s. 6d., 2s. 6d., 3s. 6d., and 5s. each.

As an indication of the approval the planted corks meet with, we have made up large numbers specially for some of our customers, as many as 100 going to one place.



BLOCK OF CORK FOR SUSPENDING, SHOWING FERNS PLANTED UPON IT.



TREE-FERN STEM WITH FERNS GROWING UPON IT.

VIRGIN CORK.

This very useful and ornamental bark is now so well known that it is almost unnecessary to say anything as to its value for covering bare walls in the Fernery or elsewhere, for making grottoes, imitation rockwork, hiding the edges of stages and shelves, and the many other purposes for which it may be utilised, in all of which it adds greatly to the appearance of the place where used.

PRICES.—Bales of 1 cwt., 20s. ; $\frac{1}{2}$ -cwt., 11s. ; $\frac{1}{4}$ -cwt., 6s. ; smaller quantities, 3d. per lb. ; selected pieces, 4d. per lb.

PLEASE NOTICE.

When ordering Ferns, please add to the list the names of a few others that may be substituted should we be sold out of any of those more particularly required.

Instructions should be sent with each order, stating whether the plants are to be forwarded by Passenger or Goods Train, and whether they are to be packed in or out of pots. When the Ferns ordered are to be planted out, or if they can be re-potted on arrival, we strongly recommend our customers to have them sent out of pots (with any necessary exceptions). When sent out of pots they cost much less for carriage, they pack in considerably less compass, and travel a great deal safer than when in pots.

Our mode of packing out of pots is such that there is no danger whatever of injury to the plants during transit.

The prices quoted in this Catalogue do not include cost of carriage by Parcel Post or otherwise, so that whenever purchasers wish plants sent by Parcel Post, an additional amount should be included in the remittance to cover this cost.

We shall have pleasure in quoting prices of any Ferns or Collections, Carriage Free.

Extra plants are sent towards cost of carriage paid by purchasers, and we shall be pleased to know whether our customers prefer larger plants of those ordered, duplicates of them, or other varieties.

Correspondents must please be sure to sign their letters, and put in addresses. We frequently receive orders without signature or indication from whom they have come. This causes much unnecessary delay, trouble, and annoyance.

Purchasers with whom we have not previously had the pleasure of transacting business, will oblige by enclosing a remittance with and for the amount of the order sent.

When Goods are forwarded before payment, accounts become due on receipt of consignment, and we shall feel obliged by our customers forwarding a remittance by early post after receiving Goods.

PACKAGES.

We charge as low as possible for packages, and allow one-half of the charge if they are returned to us in good condition within a month from date of invoice.

All packages for which a charge is made must be returned within the time specified, or paid for.

It is particularly requested that customers will have their names and addresses put upon the address labels of returned packages, that we may know from whom they come. We should also be advised by post when they are despatched.

When packages are not charged for, customers need not trouble to return them.

FOREIGN ORDERS.

Customers abroad must please send with their orders a remittance to cover cost of goods ordered, cost of Wardian Case if Ferns are to be sent so packed, and cost of freight which has to be prepaid when Cases of Ferns are carried on deck of Steamer.

To give an approximate idea we may say that a Wardian Case to hold 70 to 80 plants costs 25s., to hold 90 to 100 plants 30s. Freight and shipping charges from 21s. to 63s.

By means of a special mode of packing we are now able to send Ferns in closed cases with most satisfactory results, instead of sending them as formerly in Wardian Cases. There is thus a saving of the cost of the latter and really less risk of injury to the plants. Judging by results of various experiments, we have come to the conclusion that in most instances the closed cases are the better as well as less costly. When a remittance accompanies the order, which it should do from all new customers, we do not make any charge for the packing-case. Freight and shipping charges, however, have to be prepaid and must be taken into account when sending remittance.

The best plan is to forward a remittance for a certain amount, accompanied by a list of Ferns required, giving first the names of those most particularly wanted, following with others that may be substituted for any of the first named which may be out of supply at the time. We will then see that the order is attended to in a manner which will be sure to give satisfaction to our customer.

A WONDERFUL BEETLE TRAP.

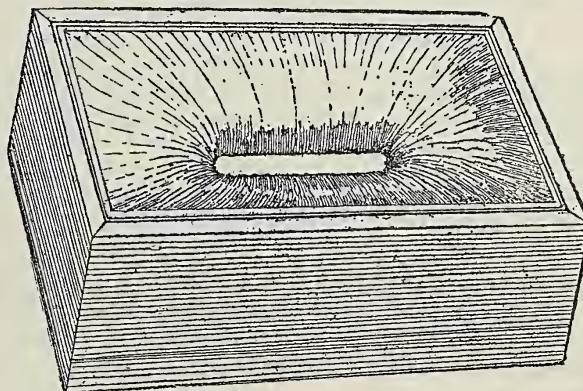
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2,000 COCKROACHES CAUGHT IN ONE NIGHT!

IN ONE OF

 **BIRKENHEAD'S BEETLE TRAPS.**

REGISTERED.



Pine,

1s. 3d. each.

1s. 8d. each,

free by

Parcel Post.

A gentleman had five Traps from us, and writing afterwards says, "The Traps were *very* successful. **One trap** caught last night no less than **2,000**."

Writing again several days after, he sent a further remittance, saying, "As all the Traps I am now getting are to give away (as I think I am giving a really useful article), will you send one to each of the four following addresses."

A clergyman wrote, "I write a line to inform you that your Trap is a perfect wonder. One morning my servant counted them, and there were about **590** Black Beetles caught in one night, quantities of young ones. Three or four nights there were some **500** or more, last night about **300**. Please send me another Trap."

A gentleman sending a second order writes, "In **one night** I caught **1,570** Beetles in **one Trap** in the stoke-hole of my greenhouse, and **1,074** in another in the kitchen. I have caught great numbers since, but have not taken the trouble to count them."

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- Also many other Books on Horticultural and Botanical subjects.

HINTS ON THE CULTIVATION

OF

FERNS.

—:0:—

THE greatly-increased popularity of Ferns, indicated by the many enquiries we are constantly receiving as to the conditions necessary for their well-being, leads us to enlarge somewhat upon our former "*Hints on the Cultivation of Ferns*," with the hope that by placing the results of our own experience and observation before our readers they may secure for themselves the delight and pleasure which the successful cultivation of these graceful plants is sure to afford. Our object will be to give clear and concise information, rather than to enter upon an elaborate and lengthy dissertation.

In the first place we would remark that the nearer we can attain to their natural conditions of growth, the better we shall succeed in their cultivation, and it is a great encouragement to try to do this when we know that they are not only the most beautiful class of plants grown, but also the most accommodating, as many of them will grow where little or nothing else would. The evergreen varieties are always nice, and prove a source of pleasure the year round, particularly in winter, when their soft green foliage is so cheering; and although the deciduous kinds are lost for a while during the winter months, when they reappear in spring the beauty of their new foliage is doubly appreciated. Ferns, on account of their many good qualities, are worthy of everyone's attention, and repay a hundredfold those who bestow upon them the necessary care, and whether they be cultivated in the stove or greenhouse, in the outdoor fernery, on shady window sills in boxes, in the drawing-room in cases, or in the house without cases—in every suitable situation they will add a charm to the place otherwise unattainable.

We purpose giving a few hints as to the temperature, watering, repotting, and soil, &c., required by those grown indoors in pots, in rockeries, and in hanging baskets; the treatment, &c., of Filmy Ferns; also of those in an outdoor fernery, those in Fern cases, and those growing in rooms without covering; and in addition, a few suggestions as to the eradication of the insects by which they are liable to be attacked.

It is necessary to remember that Ferns are shade and moisture loving plants. Yet the amount of shade, and also of atmospheric moisture, required by the various species is so varied that we feel ourselves under the necessity of roughly dividing them into classes, and noting the particular treatment most suitable for each class. We say roughly, because we can only speak in general terms in any remarks which claim to be brief. Nevertheless we hope even with brevity to give hints of much value to those who are inexperienced in the management of Ferns.

The fact that Ferns are generally found growing under the shelter of larger vegetation, or of rocks, or sloping banks, will at once suggest the necessity for cultivating them under somewhat similar conditions, *i.e.*, protected from the direct rays of the midday sun, and from the force of strong winds; for although Ferns are sometimes found exposed to both sun and wind, yet such plants lack that delicacy of colour and texture which make those in sheltered situations so lovely and refreshing to look upon. Those which require the deepest shade are what are known as FILMY FERNS, amongst which are the various species of *TODEA*, *HYMENOPHYLLUM*, and *TRICHOMANES*. Most of these do well in a house or frame having a north aspect, and with all the light such an aspect will afford in the dark winter months, during which the glass should be kept clean and unshaded, say from the middle of November to the middle of February. About the latter time the increasing brightness of the sun will make slight shade necessary for houses exposed to direct sunlight; and this must be increased in density as the summer advances, and lessened again as the days shorten in the autumn.

Filmy Ferns flourish in an atmosphere heavily charged with moisture at all times, and rather deep shade is necessary in summer in order to retain sufficient moisture in the atmosphere. This should be done by watering or syringing the walls and paths, and such surfaces as can be conveniently watered without throwing it on the foliage. We would say, do not syringe the fronds if it is possible to keep them damp enough without it. The condensation of moisture on the fronds is what is desirable, rather than syringing volumes of water upon them, though in very hot and bright weather slight syringing may be necessary in some situations, for the fronds must never be allowed to get dry enough to cause them to shrivel. Artificial heat should not be given to Filmy Ferns, except in the case of a few of the very delicate subjects from hot climates, and to keep them from freezing during winter. The temperature of our country is high enough for many of those in general cultivation, such as *TODEA SUPERBA*, *T. PELLUCIDA*, *TRICHOMANES RADICANS* (the Killarney Fern), and some of the *HYMENOPHYLLUMS*, and they may be grown beautifully in a cold garden frame, where the requisite shade and moisture are provided for them. Indeed we find artificial heat more productive of injury to these Ferns than the frost of the late severe winters. If they must be in a house artificially heated, they will be benefited by an additional glass covering, to prevent the drying influence of the heat from the pipes spoiling their appearance by browning and shrivelling their foliage.

Among the Ferns which come next on the list in their love of shade and moisture are *ASPLENIUMS* and *SELAGINELLAS*, most of which delight in situations very similar to those suitable for *Filices*, but with rather less shade and atmospheric moisture.

The different species of the above, however, differ greatly in their requirements in respect to heat, some being perfectly hardy and others requiring stove heat, while between the two are plants suitable for all gradations of temperature, their requirements in this particular being shown by their arrangement in the catalogue under the various headings of Stove, Greenhouse, and Hardy Ferns.

With still less shade, we find the genera *ATHYRIUM*, *CYRTOMIUM*, *DIPLAZIUM*, *MENISCIUM*, *ONOCLEA*, *SCOLOPENDRIUM*, &c., to grow well; and flourishing in still more light and air there is a host of species and varieties, which constitute the great majority of Ferns found in the general collection, such as many species of *ADIANTUM*, *BLECHNUM*, *DAVALLIA*, *LASTREA*, *LOMARIA*, *NEPHRODIUM*, *NEPHROLEPIS*, *POLYPODIUM*, *POLYSTICHUM*, *PTERIS*, and *WOODWARDIA*, and the many minor families, nearly all of which do well with abundance of light and a moderate amount of air, requiring protection simply from the scorching rays of the sun, and, in the case of those growing out of doors, from strong wind also.

We have now to speak of a class of Ferns which require treatment almost the opposite of that suitable for *Filmy Ferns* in the matter of light and atmospheric moisture. We refer to the *CHEILANTHES*, *NOTHOCLÉNAS*, *PELLÉAS*, and *WOODSIAS*. These exquisite Ferns require abundance of light and air, and should be near the glass, in a position in which plenty of air can circulate about their foliage. When potted, the smaller growing varieties are benefited by being pressed and held firmly between flat pieces of stone, of which there should also be small fragments mixed with the soil, for the most perfect drainage is necessary for the health of all these plants. The *ASPLENIUMS SEPTENTRIONALE*, *GERMANICUM*, *RUTA-MURARIA*, and *CETERACH OFFICINARUM*, will do well with the same treatment. The *GYMNOGRAMMAS*, among which are the Gold and Silver Ferns, require strong light and a good circulation of air, the latter created by the hot water pipes in their vicinity. Great care should be taken not to allow any water to get on the fronds of the *Gymnogrammas*.

In recommending a good circulation of air, we do not mean cold, cutting draughts and wind, but a buoyant atmosphere in gentle motion, caused by suitable ventilation of the structure in which the plants are growing.

TEMPERATURE.

Ferns and *Selaginellas* requiring artificial heat are divided into two sections, viz., those from tropical countries requiring a stove temperature during winter of from 60° in the night to 70° or 75° in the day, rising as the days lengthen to 70° in the night, and 80° in the day during summer, again declining to winter temperature by degrees as the colder weather comes on, and the days shorten; and others requiring during winter only a greenhouse temperature of from 40° to 50° in the night, to 50° or 60° in the day, gradually rising as the days lengthen, and the light becomes greater, to 60° or 65° in the night, and 70° or 75° in the day during summer, again declining as the days shorten, &c. No harm will be done if the temperature rises even 10° higher than the above if caused by the sun, but it will not be wise to raise it so high by artificial heat.

Many Ferns growing in the tropics are found at high elevations on the mountain sides where the temperature is much lower than in the plains below, consequently these do better in a greenhouse than in a stove temperature. We have endeavoured to divide them in this catalogue into the two divisions most suitable for each individual plant, but it is well to bear in mind that some species grow both in the tropics and in the more temperate regions, hence it will be found that some classed in the stove section will grow in a greenhouse, and *vice versa*.

In keeping up stove temperature, artificial heat is, of course, required, as it is also for greenhouse temperature, though not to so great a degree; and as Ferns in their native habitats—with some few exceptions—grow in moist situations, revelling in a humid atmosphere, it may be put down as a rule, always to be followed, that the atmosphere in the stove and greenhouse must be kept moist. This may be done by damping the walks and walls with a watering-can or syringe, not, however, wetting the *foliage* of the Ferns any more than can possibly be helped. We do not advocate syringing Ferns as some people do, and we are sure that far more harm than good is done by this practice. In exceptional cases it may be beneficial, but it is only in such, and not as a rule, therefore it is advisable for all but the most experienced to avoid it altogether. If plenty of moisture is kept in the atmosphere, by the means previously specified, it will answer the purpose better than syringing the Ferns, as it will not be attended by the dangers accompanying the latter course, especially where *Gymnogrammas* are growing. It is almost certain death to these Ferns to get their foliage wet, as it causes their fronds to damp off, and the plants become weak, and eventually die. The temperature being kept up with the necessary moisture, the next thing to be considered is the

WATERING.

Those in pots should be examined *every day*, particularly those in small ones, as they get dry quicker, and suffer sooner than those in larger pots. *Ferns and Selaginellas should never be allowed to become dry at the roots*. If they do so, it is sure to injure, and in some cases kill them outright, but while care must be exercised not to let them become *dry*, care must also be taken not to make them *too wet* by watering *when they do not require it*, or the soil will become sour and the plant sickly. In watering plants, a great mistake is sometimes made by a *little* being given every day, thus keeping the

soil near the surface damp, while that below becomes quite dry, and the roots being principally at the bottom, the fronds shrivel and die one after the other, causing much anxiety and disappointment. When a plant is getting dry, a good supply of water should be given, filling the pot with sufficient to thoroughly wet *all* the soil, and no more should be given until it really requires it. If a plant has become very dry, as is sometimes the case, through being overlooked, the soil will have contracted, leaving a crevice between it and the pot, so that when water is poured into the pot it runs out again almost as quickly; in this case it does the plant very little good, as, instead of penetrating the ball, it goes between the pot and the soil, only wetting the soil nearest the pot. To saturate the whole of the ball, it should be placed in a vessel containing tepid water as deep as the pot, and allowed to remain fifteen or twenty minutes, until the water has penetrated thoroughly. The water given to the Ferns should be the same temperature as the atmosphere of the house in which they are growing, the chill being taken off by adding warm water, unless it has been standing in the house a sufficient length of time for it to have become as warm as the atmosphere. In summer, of course, they will require watering oftener than in winter, but they must always have it when getting dry, at whatever time of the year it may be. Thus, plants should be examined *every day*, in the morning in winter, in the afternoon or evening in summer. They must be watered freely when they are getting dry, and not again until they really require it.

POTTING.

Ferns require re-potting oftener when in small pots than in large ones. The best time of the year to commence is about February, when they will be starting into growth, and the sooner they are done after that the better it will be for the plants.

The pots *must be clean*. If they have been used before, they must be washed and scrubbed clean inside and out, this being necessary for the health and appearance of the plants. The pots when used must also be dry; if either *dirty* or *wet* pots are used, the evil consequences will be evident when next the plant is to be re-potted, for it will be impossible to remove it from the pot without leaving behind a quantity of soil adhering to the sides, which will almost certainly break off a number of the roots, and thus injure the plant. New pots, before being used, should always be dipped in water until they cease to absorb it without remaining wet on the surface. A pot new from the kiln will absorb a large quantity of water, and if this is not supplied before being used, it will rob the soil of its moisture to such an extent that often it will be difficult to get water to penetrate the ball of soil, and the plant will languish from drought, while perhaps the surface of the soil appears wet enough.

COMPOST.

The Compost for the general collection should consist of *good fibrous loam, leaf mould, good peat, and sharp coarse sand*, in equal proportions, well mixed together, but kept as coarse as possible, each ingredient except the sand being better in pieces from the size of a pea to that of a walnut, than in finer particles.

For ADIANTUMS the peat should be left out of the compost, and a little more leaf mould and loam may be added instead.

The great object should be to have the compost open, that the water may pass readily through it, and of course be followed by a change of air in the soil, which is exceedingly beneficial to the roots of the plants. Soil holding water in a stagnant condition will cause the death of almost any Fern remaining in it for a length of time. For FILMY FERNS the compost ought to be of a very open character, and may be composed of equal parts *fibrous loam, peat, broken stone, leaf mould and charcoal*. The material should be broken in pieces from the size of a hazel nut to that of a walnut or larger, all the finer particles being sifted out and used for other purposes. The object of this open compost is to secure the previously mentioned requisite of a free passage of water through the whole body of soil, and the free admission of air to the roots of the plants. Where such compost is used, it will be found that the best roots are those which lie in the crevices between the pieces of compost. It must also be remembered that with such a compost, frequent and abundant waterings must be given, and the advantage of this treatment will soon be seen in the vigour and beauty of the plants.

The small Filmy Ferns require little more than finely broken stone, with a little leaf mould and loam, and should be planted in shallow pans; while some of the very delicate species grow well on the stems, or pieces of stems, of Tree-ferns, kept constantly moist by water carefully given. The soil and the pots being ready, the latter should be crocked, that is drained by putting one piece of a broken pot at the bottom, hollow side down, large enough to cover the hole, and a number of others over and around it, to the depth of an inch or so, according to the size of the pot, and on the top either a layer of moss or leaves; the object of the former being to allow the surplus water given to the plant to drain away, and the moss to prevent the soil washing among the crocks and stopping up the drainage, which would soon cause the soil to go bad. The plant to be re-potted may be turned out of the pot in which it has been growing in most cases by placing the left hand over the ball of the plant, turning it upside down, and giving the edge of the pot a sharp knock on the bench, when it may be taken off; then remove as much of the soil and drainage as can be done easily without injuring or breaking off the roots, put a little soil in the fresh pot on the top of the moss, and then place the plant upon it, press down and fill all round the ball with fresh soil, making it firm but not hard, with the potting stick; the top of the ball when in the new pot should be low enough to allow of a good supply of water being given when

watering, for example in a 4½ in. pot it should be about half an inch below the rim, the depth being increased in proportion to the larger size of pots used. When the Fern is firmly planted in the new pot, it should be gently watered with sufficient to saturate the ball and new soil, and not again until it requires it, as previously mentioned. Large plants when re-potted will often require a considerable quantity of the old soil removing. This must be done carefully, and as few roots as possible broken off. Care also must be taken not to put any plants into *pots too large*. It is better to pot them frequently, using a rather larger pot each time, than to put a small plant into a large pot, for in many instances such a course will cause its death. Some will require re-potting several times in the season, but once a year will be often enough for the larger plants. When a pot is well filled with roots, the plant needs a larger one, and should be transferred, unless it is getting late in the year, and not likely that it will grow much more that season, when it may safely be left until the beginning of the next year, seeing, however, that it does not run short of water during the winter. Healthy plants having filled their pots with roots, usually may be moved thus—from a 3 in. to a 4½ in. pot, a 4½ in. to a 6 in., a 6 in. to an 8 in., an 8 in. to an 11 in. or 12 in., a 10 in. to a 14 in. pot, and so on, the measurements being across the pot, inside at the top.

In all instances of Ferns growing from crowns, those crowns should be kept well out of the soil, and not buried in it, otherwise there is danger of their rotting. Some have underground rhizomes, which should be buried, while others have rhizomes creeping on the surface of the soil, which should never be buried, but if loose these may be fastened down with small pegs of wood.

HANGING BASKETS.

These are very ornamental, and many Ferns to do well and show their beauty should be suspended, as otherwise their long, drooping, and graceful foliage is not seen to advantage. The baskets, whether of wire, cane, or wood, must have a lining of moss inside, to hold the soil in its place. When the Fern is planted, the soil should not be quite so high as the side of the basket, or the water will run off instead of through. These will require daily examination, and should be well watered as often as they require it, for they dry up rapidly. Some of the *Adiantums*, such as *assimile* and *amabile*, planted in these baskets, send their creeping rhizomes down and through the crevices, forming crowns, and producing fronds in such abundance as to completely hide the basket with a mass of beautiful green foliage. This shows well against the light, and produces a charming effect. *Davallias*, *Goniophlebiums*, *Polypodiums*, and numerous others, do remarkably well so grown under these conditions.

HANGING BLOCKS OF CORK BARK.

This is a novelty introduced by ourselves, and giving much more pleasing results than baskets. A piece of cork bark is taken, on the inner side of which a layer of moss, larger than the cork itself, is arranged roots upwards; on this the Fern is placed, and its roots surrounded with compost, in quantity according to size of plant and cork. Over the compost and roots of the Fern the overhanging moss is drawn so as to cover all the soil; then the moss and Fern together are fastened on the cork by thin copper wire, worked across in different directions and twisted round copper tacks driven into the edges of the cork. The whole is then suspended by one wire bent into a hook if to hang against a wall, and by three or four wires and a hook if to hang like a basket from the roof of the house.

These will require watering frequently, and occasionally they should be soaked to ensure thorough saturation. With this treatment the moss will grow as well as the Fern, forming altogether a most lovely object. *Davallias* especially delight to have their creeping rhizomes among the damp moss, and their roots through the moss into the compost. Suspended near the glass roof of the house, under these conditions, they grow luxuriantly, and are very beautiful.

FERNS IN ROCKWORK (IN STOVES OR GREENHOUSES).

Ferns planted in rockwork require much less attention than those in pots. They have not to be watered so frequently, neither have they to be repotted, but if planted in good soil to begin with, they will grow for years, and attain a size they rarely do when in pots. They must not be allowed to become so crowded as to interfere with the development of their fronds, or shade too much the smaller growing species planted underneath. We would here give a word of warning against a plan sometimes adopted of watering Ferns in a rockery by means of a hose attached to a water pipe. This is a dangerous practice, causing in many instances a sad state of things. The water so distributed is *too cold*, many plants get it on their fronds till they are dripping, when they ought not to have any at all; such a volume of cold water as is often administered makes the place too wet, and produces sickness where all ought to be health. Although more trouble, and taking up more time, it will repay anyone to water their plants carefully and judiciously by means of a can with a rose, using water from which the chill has been taken, and giving more or less as it may be needed.

OUTDOOR FERNERY.

No garden should be without its outdoor Fernery, either large or small; a shady situation is required, and Ferns will grow in many places where other plants would die, making a most *interesting* spot of what would otherwise be a barren place. With blocks of limestone, sandstone, or tufa, the rougher the better, and a mixture of peat, loam, leaf mould, and sand in equal proportions, a place may be prepared either on a large or small scale for the occupation of our native Ferns, many of which are as interesting and beautiful as those coming from warmer countries. In addition to native

Ferns, there are many North American and Japanese species now available for intermixture, giving a greater variety of foliage for the hardy fernery. Once made, very little attention is afterwards required; they will be benefited by being watered occasionally, especially in the summer months. A protection of old fronds or other material placed over the crowns in the autumn will enable the more tender varieties to bear the severity of our winters, but the protection must be removed in the spring, when the young fronds begin to grow.

FERN STANDS AND WARDIAN CASES.

There are many lovers of Ferns who, living in towns, have no convenience for cultivating them in a rockery, and who yet desire to have them. To such we would recommend a fernery on a small scale, from a rustic stand 8 or 9 inches in diameter, with a propagating glass to cover the plants, to the larger and more commodious Wardian or Fern case of from 2 to 3 feet in length.

There are many varieties suitable for these cases, which with a little care and attention will yield great pleasure. Having procured a stand and glass, or case, soil properly prepared as recommended previously, and Ferns, place drainage at the bottom as in pot culture, cover with moss or leaves, put in the soil, plant the Ferns, keeping the tallest for the centre, intersperse a little *Selaginella* which will spread and cover the surface, then water gently till the soil is thoroughly damp, and put on the glass or close the case whichever it may be; place them as near the window as possible, to get plenty of light, but protect them from the sun, if they stand at a window through which it shines. They will not require watering again for some time, but when the surface gets dry, they should be watered gently as before to the extent required. After a case has been planted a year or two, it should have fresh soil put in, which will necessitate clearing it out and replanting the Ferns as at first, after which they will again grow with renewed vigour. The best time for replanting is in spring. Should the glass become dim through the condensation of moisture upon it, a little ventilation may be given.

FILMY Ferns are especially suitable for the close atmosphere of the Wardian case and fern stand, and are exceedingly lovely when so cultivated. These may be watered overhead, but others should have their foliage kept dry as possible.

FERNS FOR ROOMS.

Ferns are often kept in dwelling-houses without glasses or cases, but owing to the dryness of the atmosphere they cannot possibly grow so well as when in a damper place. They, however, succeed for a time, and are useful for table decoration, also for placing before the window, where they grow better, live longer, and look prettier than any flowering plant that can be obtained. They must be regularly supplied with water, the fronds now and again being gently sponged with clear tepid water to remove the dust which accumulates on them. The same may be said of these as of those in the greenhouse, only water when requisite, then give plenty, using water as warm as the room where the plants are growing. If these matters are attended to, they will do much towards enlivening and beautifying the room. Some species are very much more suitable than others for rooms. We are always pleased to advise in choice of sorts, when the kind of situation for which they are required is made known to us.

INSECTS.

Wherever growing, Ferns are subject to the attacks of Insects. These are "scale," which look like small stationary protuberances, but which nevertheless multiply and spread rapidly, doing much injury. These must be picked or sponged off, clearing the plant of every one, using warm water, in which is dissolved soft soap in the proportion of 2oz. to a gallon. This is a cheap, simple, and efficacious insecticide. Next come "Thrips," small, thin, black insects, about $\frac{1}{16}$ of an inch long (white when young). These are very destructive; they soon disfigure the plants upon which they live, attacking those that are in poor health, quickly making them worse; plants growing in too warm a temperature are often attacked, as they are not then so strong and healthy as when cooler. The best remedy is to examine the plants so infested, pick the insects off one by one, and then sponge or syringe the plants with clear water. An easier method, where *many* plants are infested, is to fumigate the house three or four times on alternate nights with tobacco paper, not giving too strong a dose at once, as it is liable to injure the young fronds; this will also destroy another pest, "green fly," which is almost sure to make its appearance sooner or later, but fortunately is easily disposed of by any of the above methods.

Besides the above there are also several

OTHER PESTS

which prove very troublesome to the cultivator of Ferns, the well-known "cockroach" or "black beetle" being a great enemy, with which we may class "crickets" and "woodlice." As these usually come out of their hiding places at night, at which time they feed on the young fronds, diligent search must be made for them by candle or lamp light, at the same time keeping a look-out for slugs and snails, which are equally if not more destructive than the preceding. It is almost useless attempting to find these in the daytime, but an hour or two after dark they are generally easy to find.

In addition to the above mode of eradication, poison may be laid for the beetles, or beetle-powder may be used as recommended by the different makers. For woodlice, traps may be laid,

consisting of small pots laid on their side with a little moss inside, into which they will creep to hide. For slugs and snails pieces of apple, turnip, carrot, or potato hollowed out and laid here and there will often prove of great use in their capture; these various traps should be examined each day. Once these enemies are caught different modes of killing them will naturally suggest themselves to the captor.

SHADING.

Movable blinds are undoubtedly the best medium for protection from the sun. They may be made of coarse canvas or other material which is open enough to admit considerable light, the object being not to keep out the light but to break up the rays of the sun so as to prevent scorching. We use a shading of flour and water, in addition to the canvas blind, in the bright weather of summer. We find that, mixed with cold water and put on like limewash, it sticks well to the glass. Sometimes the first application partially washes off with the rain, but the second remains all the season. On the first requirement for shade we put on a thin coating of this flour and water, and then add another thicker coat as the sun gains more power. This causes a subdued light, very congenial to the Ferns; but this shading is supplemented by canvas blind when the sun shines strongly, which however, is drawn up again as soon as it can be dispensed with.

When blinds are not available, the *flour and water*, *whiting* and *buttermilk*, or one of the numerous white or cream-coloured shading materials now sold for the purpose, must be used thicker, or laid on more frequently till the requisite density is obtained, that being decided by the aspect of the house and pitch of the roof. A roof facing south requires much more shade than one facing east or west, and one facing north still less. The great drawback to heavy permanent shading lies in its not admitting enough light in dull, sunless weather. Our remarks on shading apply, of course, to situations open to the full sun; but where shade, or partial shade, is afforded by trees or buildings, that must be taken into account and allowed for.

The blinds we use are fastened along the ridge of the house, and their bottom edges nailed on rollers of three inches diameter, from 14 to 28 feet in length. The shorter ones are easier to work than those of greater length. These rollers are drawn up by means of ropes passing over pulleys against the ridge of the house. These ropes are fastened to the ridge under the blind and under pulleys fixed at one-fourth the length of the roller from each end. The ropes thus fastened come down under the blind and roller, and then over the roller and blind back to the pulleys on the ridge through which they pass, and the two ropes then meet over two centre pulleys, and either pass down into the house from whence they are worked, or else are brought back over the blind to the bottom of the roof. When the ropes are pulled the rollers are drawn upward and wind the blinds in their course to the top; the ropes are then made fast. When they are again loosened the weight of the rollers causes them to roll down the roof and at the same time to unroll the blinds. The pulleys are fixed at the proper angle to secure the smooth working of the ropes. Four pulleys are required for each roller, two in the centre, and one half-way between the centre and each end of the blind.

In concluding these remarks, we would say that we shall have pleasure in giving further information as it may be required, for difficulties may arise not dealt with here, upon which it will be easy to throw light when we know the particular circumstances which give rise to them.



FERNS AND FERNERIES

From "*GARDEN WORK*," October 15th, 1887.

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THE following remarks on Ferns and Ferneries are extracted from a lecture delivered before the Manchester Horticultural Improvement Society, by Mr. W. Birkenhead, the well-known Fern nurseryman, of Sale, Manchester :—

"AN ART THAT DOTHT MEND NATURE."

How many natural dells and ravines there are which might be made into places of delightful resort by the outlay of a little labour, and the addition of specimens and clumps of our native Ferns suitably placed ; where winding walks, bordered by upraised irregular terraces and sunken depressions, with rocky projections and shady recesses, judiciously planted with our favourites, would call forth expressions of admiration from those who delight in such haunts ! And if, over all this, a glass roof could be placed, and the ends blocked up with masses of rock covered with creepers, or with clumps of shrubs or trees, what a splendid array of grace and beauty could be secured by adding the hardy exotics to the abundant beautiful forms of our British Ferns, such as the tasselled *Athyriums* and the crested *Scolopendriums*, producing a veritable paradise, or garden of delights ! And what higher form of gardening could be conceived than the imitation of Nature in such an aspect ?

ARTIFICIAL FERNERIES.—"MORE LIGHT."

We need not wonder at the increasing taste for rock-built and glass-covered ferneries in gardens where natural ravines are not found ready to hand, nor need we be surprised at the large expense many gentlemen are willing to incur with the object of securing such a fairy retreat for the occupants of their homes and the delectation of their visitors.

I must here give expression to my regret that often these very places, intended for refreshment of mind, fail to afford the pleasure they might be made to give, through the injudicious arrangement of the rockwork in the interior. I refer to the too lavish use of arches and masses of overhanging rock, which prevent the light reaching the lower parts of the fernery in sufficient measure for the well-being of the plants there situated, the inevitable result of which is that they dwindle away and die, leaving bare those parts which ought to be most amply furnished with verdure because of being below the eye of the spectator. Now, my impression is that the foliage in the lower parts ought to be quite as luxuriant as that above, and that luxuriance ought to reach down to the very margins of the paths. This happy effect can only be insured by arranging for an abundance of light to find its way to the lowest parts of the fernery. My ideal, therefore, would be an arrangement of irregular terraces, rising in varied steps upward and outward from winding paths to the base of the glass roof, the contour of the whole series of terraces representing an angle of 40 degs. to 50 degs., so that the light might flow strongly to the very lowest parts of the fernery. Sufficient shade would still be found below the larger Ferns for those requiring a greater depth of gloom ; and I would here observe that, although Ferns generally cannot endure scorching sunshine, yet a large amount of light is necessary for their perfect development, and, in the winter months, all we can get of this agent is less than enough for the well-being of evergreen species.

Seeing, then, that a heated fernery is for pleasure in winter as well as in summer, care should be taken to provide for plenty of light at all seasons, simply shading in summer to prevent scorching, and taking care in winter to keep the glass thoroughly cleansed from soot and dirt, that no obstruction to light be caused by their presence, for light is one of the greatest essentials to the growth of vegetation.

POCKETS FOR THE PLANTS.—SOIL.

With regard to the terraces or pockets, they should be so built as to admit of a large body of compost for the use of the plants, and be well drained to allow all surplus water to escape easily. The compost itself should be rough rather than otherwise, containing a good proportion of broken pieces of peat and loam as large as a walnut or an egg, with rough leaf-mould and sand—small nodules of charcoal and stone being valuable additions. If peat, loam, and leaf-mould are used in about equal proportions, with a liberal addition of sand, charcoal, and stone, a good compost is obtained suitable for general Fern culture. For Ferns in small pots, of course smaller pieces must needs be used ; but even then the compost ought not to be too fine in texture, but sufficiently coarse to allow water to pass readily through it.

PLANTING.

Now for a word about planting the Ferns. An excellent effect is produced by planting a number of one species or variety in a mass, and next to it a mass of a different kind, distinct in form or colour, so as to create a contrast, by which the beauty of each variety is greatly enhanced, and made conspicuous. Large growing Ferns of course should be placed singly to stand up above the others, and to show off their individual graces. Care should also be taken to secure a proper balance of form and colour in the disposal of specimens or clumps.

WATER.—SUSPENDED BLOCKS.

In a fernery such as that described trickling and running water, or even water standing in irregularly-shaped pools, is a great improvement to the general appearance, as is also the addition of rough blocks of virgin cork, with Ferns secured to them by moss bound on with copper wire and suspended from the roof. The Davallias especially luxuriate with this treatment. These cork blocks are also valuable additions to ferneries where the Ferns are grown in pots on stages, and they look well hanging against the walls where there is sufficient bare space to admit of the addition.

AN OUTDOOR FERNERY.

Passing now to the construction of an outdoor fernery, I would suggest the importance of having a large body of compost connected throughout, if possible, and also having a broad base on the ground to insure uniformity of moisture and to prevent the tendency to dry up, which small bodies of soil are necessarily liable to when exposed to wind or sun. And, even where the sun never reaches, the foliage of luxuriant plants is continually, during daylight, throwing off moisture drawn by the roots from the soil, so that it is important to secure for them a good and steady supply in the soil in which they grow, otherwise much labour is involved in artificial watering, or the plants are lost for want of it.

DRAINAGE.

We must not, however, fall into the error of constructing our rockery without ample drainage, but should provide for the passing away of all surplus water. If the rockery is to be large, a hole should be dug in the ground some depth, and filled with broken bricks, crocks, clinkers, or stone, which should rise above the surface of the ground where the centre or ridge of the rockery will come. This heap of open material should then be covered with sods or some rough litter, to prevent the soil working into it.

CONSTRUCTING THE ROCKWORK.

The process of building may now be commenced, the same order being observed as that recommended for an indoor rockery, taking care to make it as irregular as possible, here projecting, there receding, and working upwards by the formation of terraced pockets. The stone or other material should be so placed as to prevent the soil washing down; and the incline of the soil in the terraces should rather be inwards than outwards, so that the rain may be caused to permeate the whole body of compost, and prevent its getting dry in the interior; and to further effect this object, there should be a large proportion of bog or peat, or other moisture-holding substance in the composition.

MOUNDS AND DELLS.

If there is abundance of room and material, I would say, dig far down in the ground, and throw up the soil to form miniature mountains, with natural-looking valleys between them, and use the stone as before directed, making the paths in and out and up and down—indeed the opposite of straight or level—and let the irregular stonework begin from the paths, and work upwards in terrace pockets as before said; and when judiciously planted, I apprehend the effect would be most enjoyable. We suppose, of course, that shade is provided by trees either naturally or artificially placed; but in all artificial work I would say, take care that the appearance is as though no hand had been near it. The truest art in this kind of work is found in that which looks least artificial. One further remark may be made as to the fixing of the rock. It should, in all cases, be made thoroughly firm. Commence at the front with stone slightly embedded in the earth, and rammed firmly at the back, the stones being set at such angles, where possible, as to cause them to lock into or against each other, according to shape. Each tier of stone should have its foundation rammed solid, and then be rammed well at the back as the soil is filled in, so that the whole may be a solid structure, not to be moved either by wind or rain, or even by persons climbing over it.

FILLING UP CREVICES.

The ramming of the soil must not extend further than necessary, but room must be left in the pocket for plenty of loose soil to receive the roots of the Ferns, and for them to grow in. To prevent the soil washing through the interstices of the stone, lumps of bog or peat may be used, which serve well to hold up the compost in its place, and also as a good material for the plants to root in, and thus to make a firm mass. This packing of the joints of the stone with bog reminds me of the

desirability of inserting suitable Ferns and Ivies or other trailing plants in the crevices as the work goes on, for they greatly improve the appearance of the work when they take kindly to their new home, and grow as if they had been born there. And it is worthy of remark how well they do, and how snug and protected they look when their roots are hidden away behind large stones, and only their beautiful fronds and leaves are visible in front.

SEEKING EFFECT.

Another important thing to be observed in the construction of a fernery, as, indeed, I think, in most kinds of gardening where effect is desired, is to take care to avoid repetition. If possible, have all one kind of Fern or other plant in one mass, or in masses, in one locality, and in another locality something quite different in appearance, so that at every turn something fresh may present itself to the eye of the beholder. If possible block out the range of vision at intervals by trees or shrubs or rock, so that the whole cannot possibly be seen at once, but rather that curiosity may be occasioned by turning a corner here and another there with some fresh and attractive feature peculiar to each fresh view. This is the kind of thing to give pleasure to the visitor, and to make the fernery the most charming part of the garden.

ARRANGEMENT OF THE FERNS.

I do not think I need add much to that already stated, except to advise the planting of the largest growers at or near the top of the rockery; for if large-growing plants are placed at the bottom they hide much of the rockwork, and seem to dwarf its appearance. Still it is necessary to secure some balance even in this matter, by having a few plants of medium size near the bottom, and when possible on the projecting parts, so as to make the nooks and recesses appear still deeper. To put a large Fern in a recess would defeat the object for which the recess was made, but to bring it well in advance of the recess it has the opposite and therefore desirable effect of apparently increasing the irregularity and extent of the work. Then the terraced pockets, about 3 or 3½ feet above the paths, are just the places for masses of small interesting species and varieties, which, coming near the eye, are seen to great advantage, larger kinds showing themselves at greater distances.

A FEW REMARKS ON VARIETIES.—TODEA SUPERBA.

As to the species and varieties of Ferns suitable for outdoor and indoor rockwork, pot culture, and window decoration, their name is legion, and I will not attempt an enumeration of them, but will simply give a few general hints which may be of use. I feel constrained to speak of the ease with which many Ferns, even the lovely *Todea superba*, may be cultivated when a few simple conditions are observed. Remarking upon its extreme hardihood, I would observe that the latter-named species may be seen by the score in splendid health and vigour in a range of pits, with no other protection from the weather than the glass covering, and in severe frost the addition of mats, which, however, do not prevent the frost coating them over with a hoary garment, and sometimes even freezing the soil so hard as to burst pieces out of the pots; so that no person need fear an attempt to cultivate this charming Fern. Simply sink it in a hole in the ground, cover it with glass, and subdue the light in summer by rather dense shading, and its prosperity is insured if it is planted in a lumpy compost of loam, leaf-mould, and peat, with plenty of stone and good drainage, well supplied with water at the roots, and frequently sprinkled overhead in dry weather.

FILMY FERNS FOR ROOMS.

Many other filmy Ferns are equally easy to cultivate, and do remarkably well in Wardian cases, or under bell-glasses, in a bedroom or sitting-room window on which the sun does not shine. I may add that filmy Ferns require little or no ventilation; and if air is admitted, it should only be when the atmosphere is saturated with moisture, either during rain, or in the night when the dew is heavy.

FERNS REQUIRING LIGHT AND AIR.

Very different is the treatment required by such Ferns as the *Cheilanthes*, *Pellæas*, *Nothoclænas* and *Woodsias*, most of which require abundance of light and air, and which should be grown very near the glass in an airy situation, protected from frost, and planted in an open compost, containing bits of stone or other hard material, to secure an easy passage for the water, which latter should be freely applied to the roots in summer, but never to the fronds. *Gymnogrammas* require very similar attention, with the addition of considerable artificial heat for some of the tropical kinds, while others do well with greenhouse temperature, such as *Gymnogrammas triangularis*, *trifoliata*, *hispida*, *ochracea*, &c.

ADIANTUM FARLEYENSE.

In conclusion, a word of warning against the use of peat in the compost for *Adiantum farleyense*. I am persuaded that many fail to grow this plant successfully through the use of peat in the soil. I find that when well drained, and planted in good strong loam, made open and porous by the addition of leaf-mould and sand, and placed well up to the light in a warm house, it will grow luxuriantly, and as easily as a great many other Ferns.

THE FERNS AND FERNERIES

IN

MESSRS. W. & J. BIRKENHEAD'S NURSERIES, SALE.

From "*THE GARDENER'S MAGAZINE*."

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IT is now well known to the majority of those who take an interest in ferns that the collection in the nurseries of Messrs. W. and J. Birkenhead, at Sale, is one of the largest and most complete in commercial establishments. But to fully appreciate the extent and comprehensiveness of the collection is wellnigh impossible by those who have not had the pleasure of visiting the nurseries. Some assistance may perhaps be afforded by stating that the collection comprises upwards of fourteen hundred species and varieties, and that many of the more popular kinds are represented by thousands of examples, ranging from baby plants in thumbs to full-grown specimens requiring pots ranging from twelve to twenty inches in diameter for the accommodation of their roots. How many structures the firm devote to the ferns we cannot say; but to make the tour of the houses involves a rather long journey, and there are in addition great lengths of pits occupied with kinds requiring very little artificial heat. The collection has a distinguishing characteristic not less important than its magnitude, and that is the healthy condition of the plants on all sides. Not only are the kinds requiring but little more than shade and moisture to maintain them in health growing vigorously, but kinds that tax the skill of the cultivator are in the most luxuriant condition, and show that their peculiarities are well understood and receive careful attention.

GREENHOUSE FERNS evidently receive a large share of attention, for there is not a kind worth growing that is not represented, and the space devoted to them is very large. Among the large number of kinds that arrest attention by reason of their beauty and distinctness are two comparatively new maidenheads, which have been distributed by the firm. These are *Adiantum Neo-Caledoniæ*, a distinct and handsome species, remarkable for its attenuated pinnules, and the length of time the fronds retain their freshness when cut; and *A. Mairiesi*, a handsome form, intermediate in character between *A. cuneatum* and *A. capillus veneris*, between which it was supposed by the late Mr. T. Moore to be a cross. *Gleichenias* abound, and as so few are grown, except for exhibition, it may be mentioned as a point of some importance to cultivators, that they are equally as beautiful in a small state as in specimen form. *G. dicarpa*, *G. flabellata*, and *G. rupestris glaucescens* may be mentioned as comprising the best of the group, the last mentioned being perhaps the most beautiful. *Lastrea fragrans*, a small-growing and elegant species, is distinguished by the strong perfume, resembling that of the violet, it emits when the fronds are touched or have water poured over them. *L. Richardsii multifida*, one of the most beautiful of the greenhouse ferns with crested fronds, is of rapid growth, and admirably adapted for specimen culture. *Osmunda Japonica corymbifera* is another beautifully crested fern, specially adapted for the greenhouse, and valuable for its distinct character. *Pteris serrulata cristata fastigiata* will not fail to find favour with those who are partial to crested ferns, for it is free in growth, compact in habit, and the fronds are beautifully crested; it may indeed be described as one of the very best of the crested varieties of this well-known species. Note was also made of *Asplenium ebenoides*, a new and very pretty species; *A. Seelosii*, a rare and handsome form; several new *Nothochlænas* of exquisite beauty, not yet in commerce, among them being *N. candida*, *N. chilense*, *N. dealbata*, *N. Hookeri*, and *N. Lemmoni*. With these were associated several new *Pellæas*, of great beauty, notably *P. aspera*, *P. involuta*, and *P. pulchella*. Both the *Nothochlænas* and *Pellæas* are so distinct from the ferns usually grown in the cool fernery, that they will merit special attention, more especially as they are so small in growth that they occupy but little space. Especially interesting among the filmy ferns, which are grown in immense quantities and with singular success, are *Trichomanes auriculatum*, *T. Luschianum*, *T. radicans Andrewsii*, *T. reniforme*, and *T. venosum*. The beautiful *Todea superba* has a long range of pits devoted to it, and as the plants are growing with great vigour, they present a delightfully cool and refreshing appearance at the present time. These pits are unheated, and it is a quite common occurrence for the plants to be frozen and covered with ice during the winter. That the frost is in no way injurious to this species is evident from the vigorous growth the plants are now making, and it is moreover reasonable to infer that the firm would not expose a stock comprising several hundred specimens to any risk.

STOVE FERNS include numerous rare and beautiful species that are seldom seen in either trade or private collections, as well as all the kinds enjoying so high a degree of popularity as to be met with on all sides. One of the first to attract attention is the comparatively rare *Adiantopsis radiata*, a dwarf fern remarkable alike for its beauty and distinctness, not perhaps so easy to have in perfection

as many other kinds, but it does not impose a very heavy tax upon the skill of the cultivator. Chief among the host of *Adiantums* that have a place in the collection are *A. lunulatum*, a handsome species of free growth; *A. Peruvianum*, a graceful-growing species of the most distinct character; *A. rhodophyllum*, a compact-growing species with medium-sized fronds, the pinnules very large, and of a bright brown hue when young, changing with age to deep green; *A. Seemannii*, a distinct and beautiful species not much grown; *A. Victoriae*, a charming species of dwarf growth, remarkable for the large size of the pinnæ; *A. Collisi*, a new species well deserving the attention of the cultivator. *Asplenium formosum* is a pleasing little species with elegant light green fronds. *Davallia Fijiensis* and its plumose variety are two of the most meritorious of the ferns requiring a stove temperature, for they are both robust in growth and unsurpassed for elegance of habit. Both make effective specimens. *Davallia parvula* will not be regarded with much favour by those who have a decided preference for strong-growing ferns, for when in the most robust state of health its fronds do not exceed an inch in height. It is, nevertheless, a sweet little thing that should not be overlooked. The diminutive fronds are finely divided, and of a bright emerald-green hue. *Drymoglossum piloselloides* is a capital companion to the species immediately preceding it, and a gem among ferns of small growth. *Drynaria musæfolia* and *Goniophlebium glaucophyllum* are two beautiful ferns, valuable both for their handsome appearance and distinct character. The first of the two has fronds between two and three feet in length, and with the veins so strongly marked as to give the fronds a very pleasing appearance. *Lygodium dichotomum* and *L. volubile* are two rare species, with large handsome fronds that will in due course take a leading position amongst the comparatively few ferns of scandent habit. *Nipholobolus heteractis*, in the way of the well-known *N. lingua*, is a rare and handsome species, and desirable for the contrast its large leathery fronds present to the elegant and finely-divided fronds of the majority of the ferns having a place in the stove. *Onychium auratum* must be mentioned for its great beauty, and *Pleopeltis Xiphias* and *Rhipidopteris peltata* must not be overlooked. The last mentioned attains a height of about three inches, and has small fan-shaped fronds. *Platyserium grande*, the best of the Elk's Horn ferns, is strongly represented, and it may perhaps be useful to mention the fact that Messrs. Birkenhead grow it in large numbers, and with much success, on pieces of virgin cork.

NORTH-AMERICAN FERNS are so largely grown as to constitute of themselves a feature of great interest. They are all well adapted for both greenhouse and outdoor culture, and for associating with the British species and their varieties, they are exceedingly useful because of the pleasing variety they afford. The following comprise some of the best in the section: *Adiantum pedatum*, one of the most lovely of the hardy ferns, forming under favourable conditions large masses of the most delicious verdure; *Lastrea Goldiana*, a bold-growing species, the fronds attaining a length ranging from two feet to thirty inches, and of a peculiar metallic hue; *Osmunda cinnamomea*, a distinct and handsome species; *O. Claytoniana*, a fine species with ample velvety green fronds; *O. gracilis*, in the way of the Royal Fern, but more slender in growth and graceful in appearance; *Pellaea atropurpurea*, a small-growing fern well worthy of a cool, shady nook in the fern garden; *Polystichum acrostichoides grandiceps* is the first of the known crested varieties of the North-American ferns, and so beautiful that it is impossible to repress a wish that we had more of them—it is rather dwarfer than the type, and the fronds are beautifully crested; *P. munitum*, of Californian origin, is one of the most handsome of the hardy exotics. It may be likened to the Holly Fern, but the fronds attain a length of four or five feet and a breadth of between four and five inches.

BRITISH FERNS occupy much space and evidently a large share of attention, and as the collection contains all the varieties of the several species that are worth growing, the houses and pits devoted to them are especially interesting. It was satisfactory to hear that, although the British ferns are not so well represented at the public exhibitions as they were from ten to twenty years ago, there is a brisk demand for them, especially for the more distinct varieties. To enumerate all the forms in the collection that deserve attention would occupy much space, and it must suffice to mention a few only of the most distinct. The varieties of the Lady Fern, *Athyrium filix-fœmina*, of special excellence, include: *acrocladon*, *apicale*, *curtum cristatum*, *Friselliæ*, *ramo-cristatum*, *gemmatum*, *grandiceps*, *Kalothrix*; a delicate and exquisitely-beautiful variety, requiring more care than the majority of the forms; *plumosum Axminster* variety, *plumosum elegans*, *rheticum deflexum*, and *Victoriae*, a variety, one of the most beautiful of the group. The Hard Fern, *Blechnum spicant*, has fifteen or sixteen varieties, and from these *concinnum* and *trinervo-coronans* have been selected as of special excellence. From the varieties of the Male Fern, *Lastrea filix-mas*, may be selected a large number that will not fail to give satisfaction to the cultivator; but those who can only afford space for a few should first give their attention to *crispa cristata*, *crispa polydactyla*, *cristata Barnesi*, *grandiceps*, *Pinderi*, and *ramulosissima*. The Mountain Fern, *Lastrea montana*, includes two extremely beautiful varieties, namely: *coronans* and *ramo-coronans*. The varieties of the common polypody, *Polypodium vulgare*, of exceptional merit, are *Cambricum Prestonii*, *multifido-cristatum*, and *trichomanoides*, the last-mentioned being of great beauty. Two varieties of *Polystichum angulare* claim special attention, namely: *Pateyi* and *venustum*; and from the numerous forms of the Hart's Tongue may be selected *crispum* and *ramo-marginatum*, both of which are distinct in character and decidedly handsome.



THE FERN NURSERY, SALE.

RE-PRINTED FROM

“THE GARDENER’S CHRONICLE.”

—:O:—

PERHAPS the majority of the horticultural fraternity are more familiar with that modest and truthful notice in the advertising columns of the horticultural papers—“Ferns a speciality”—than they are with the most beautiful and varied collection of Ferns which Messrs. W. & J. Birkenhead have now brought together in their nurseries. I had long promised myself the delight of inspecting their collection, and the event came off at last, and although I went with large expectations they were more than fully met with the rich and varied multitudes of Ferndom there associated. A veritable Fern world! said one to oneself, all the while filled to overflowing with the joy which arises from the true appreciation of the delicate greenery, and infinitude of differentiations revealed in Ferns. Here they are by the thousand, everything elbowing out of the way, and for the matter of that, elbowing each other out of the way until every inch of available space is replete with interest and beauty. Many old friends are recognised, and many new ones observed; indeed one was immensely struck with the rarities and fresh species and varieties here assembled, each and all forming part and parcel of the life of their fortunate possessors. Come here, ye members of the gardening fraternity, and ye who admire Fern life, and confess your ignorance of the numerous gems Dame Nature has been pleased to pass into existence without the adjuncts of floral dress! Confess also, ye members of the fraternity, your lack of taste (forgive me—refined taste, I mean), because so few Ferns are grown, when so wide a field of beauty presents itself to select from! The idea amongst gardeners in this utilitarian age seems to be “Ferns for cutting.” I would fain urge “grow Ferns for themselves.” But I must proceed to mention a few of the best and most striking Ferns noticed during an examination extending over ten hours—a time far too short—but a very rigid selection must be made to keep oneself within reasonable limits; for to mention anything like what is here to be seen would be compiling a huge catalogue—a matter so admirably accomplished by Messrs. Birkenhead in their Fern catalogue, which is a work of art, and replete with valuable information, and one was happy to see it duly appreciated in the pages of the *Gardener’s Chronicle* very recently. The utilitarian Ferns are here in enormous quantities, while the enthusiast will find much that is unsurpassed, I venture to suggest, even in our national collection at Kew, which, by the way, one is happy to learn has improved so much of late. Without further appearance of digression I will note the good things seen in the

HOME NURSERY.—Here are several low, mostly span-roofed, houses, filled to overflowing—and let us first walk through the propagating-house, and just fancy what meets you—countless multitudes of sporelings in all stages of infant happy growth!—what a host in thimble pots, other hosts in pans, others not pricked off, while multitudes are in their humble prothallic condition working out the reproduction of the Fern world! “Hidden and unseen,” cryptogamic or “obscurely wedded” members they of the green world, as the sagacious Linnæus’ name suggests. Here broad masses of *Adiantum macrophyllum*, *cuneatum*, *gracillimum*, *fulvum*, *polyphyllum*, *Aspleniums*, *Gymnogrammas*, *Nephrodiums*, *Cheilanthes*, *Gleichenias*, *Pteris*, the new and very striking *Selaginella grandis*, meet you on all sides, and beneath good batches of *Gleichenias* are being raised from spores. A most charming lot of *G. flabellata* was specially attractive, while many varieties also find a congenial home.

It seems well-nigh impossible for one to write systematically regarding this collection, for the forms which arise before one’s vision are so numerous—each deserving mention. It will be best perhaps to pass the primary genera in review, and begin with the Maidenhair Ferns (*Adiantums*). *A. Luddemannianum* is especially attractive, with its agglomerated pinnæ and dark slender stipes—perhaps the most distinct *Adiantum* of hybrid origin; it does best in an intermediate temperature. *A. dolabriforme*, grown in baskets and pyramids of pots inserted one in the other, is extremely pretty, with its crescent-shaped pinnæ, and elongated fronds bearing at the extremities young plantlets, which under proper conditions will speedily form little colonies. *A. caudatum* is another species admirably adapted for baskets, and

producing plantlets. *A. neo-caledoniæ*, one of Messrs. Birkenhead's introductions, is very distinct, with deltoid tripinnate fronds. This was fully described, I think, in the *Gardener's Chronicle* by Mr. Moore. A very fine batch of *A. Victoriæ*, so dwarf and handsome, with broad cuneate pinnules, quite distinct, was especially noticeable, while the rarer *Henslovianum* was also in good order. *A. Seemanni* and *peruvianum* were well represented, as well as *A. princeps*, *velutinum*—a magnificent species—*Wilsoni*, *amabile*, *rubellum*, *venustum*, *pelludicum*, *Williamsii*—these three being stepping-stones one to the other—*Lathomi*, the rare *reniforme*, *sulphureum*, *aneitense*, *speciosum*, and a host of others, were all in excellent health, and mostly in strong force. Before leaving the *Adiantums*, I must not forget the charming little *A. Capillus-veneris* daphnites, of which there is a large lot of most beautiful plants; also the North American *A. pedatum*, of which there are two distinct forms, one of which may be regarded as normal, having flat pinnules, while in the other the pinnules are distinctly curled upwards, and if one may be godfather I would propose that it should be named *crispum*. *Adiantopsis radiata* is so much like a Maidenhair Fern that one may be pardoned for naming it with them; but really it belongs to a section of *Cheilanthes*. It is a charming Fern, and never have I seen it in better condition than at Sale, all the plants being in the best possible health, with their pretty radiating fronds. Being a native of tropical America, this plant is grown in stove heat.

The Spleenworts also muster in strong force both as regards the number of varieties and plants. There are several South African forms which are by no means satisfactorily identified, and it is quite likely some fresh species may turn up. *A. affine* and species or varieties clustering round it are especially worth attention. There is also an excellent variety of *A. furcatum*, named *laceratum*, which is very graceful in appearance, and is certainly one of the best cool-house Spleenworts in cultivation. *A. dimorphum* is a very scarce plant; the plant usually supplied as such is *A. bifolium*, which is here largely grown; and a most useful subject it is. *A. laxum*, *resectum*, *Fernandezianum*, and *flabellifolium*, are also temperate Ferns of the first merit; while too much praise cannot be levied upon *A. rutæfolium*, which we have never seen so abundant anywhere as at Sale; handsome plants in all sizes plainly reveal its decorative and most useful character. I quite think this will ultimately prove itself one of the most useful of all Ferns. Nice batches of the rock Spleenwort (*A. fontanum*) and the Pyrenean *A. fissum* are attractive; the latter is a very pretty species, while *septentrionale*, *germanicum*, and the queer little *Seelosii* are represented, with many other hardy or frame Ferns. Glancing at the stove *Aspleniums* we notice the graceful *alatum*, also the old and much too seldom seen *A. Belangerii*. Here, too, are *A. abscissum*, *Baptistii*, *cicutarium*, *formosum*, *heterodon*, *longissimum*—excellent for baskets or mural pockets—and the charming *viviparum*, the latter one of the best case Ferns in cultivation—all of which are most attractive kinds. The Bird's-nest Fern, *A. nidus*, and the charming little *A. obtusilobum* are also well grown; the latter is arranged in pot pyramids, and very pretty it looks.

Cheilanthes, *Nothochlænas*, and *Pellæas* constitute a most interesting series, and it is when amongst these gems that the blood of the enthusiast reaches fever heat. I mention these together because in my opinion, they should be grown together, and further, because I regard them as a beautiful group. Of the former genus there are many kinds. Fancy the exquisite beauty of the "Lace Fern" (*C. elegans*), as it droops over the shelf upon which it stands, each frond a picture of beauty; this species is especially well suited at Sale. Other species of *Cheilanthes* we admired and made note of are *gracillima*, *tenuis*, *viscosa*, *alabamensis*, *californica*, *Clevelandii*, the very rare *Eatoni*, and *Fendleri*, *lanuginosa*, and the extremely scarce *Lindheimeri* (a most charming species), *multifida*, *Sieberi*, *tomentosa*, *viscida*, and *Wrightii*; these, with others, formed a most interesting series, which might well engage one's attention for a much more extended period. *C. Eatoni* is a very pretty species. Accommodated with them was a charming batch of the rare *Gymnogramma hispida* with its triangular woolly fronds; also a few plants of the rarer *G. vestita* from the Indian hills, and some of the Californian *G. triangularis*. The species of *Nothochlæna* are also numerous; especially noticeable was a fine batch of the little golden-fronded *N. flavens*, and the silvery *N. nivea*; also *Eckloniana rufa*, *sinuata*—a very lovely species, with the underside of the fronds densely clothed with silvery scales; while well worth mention are *candida*, *dealbata*, *Grayii*—a very rare and pretty species—*Lemmonii*, the charming *S. European Marantæ*, *Newberryi*, and the very scarce *Parryi*, which perhaps is scarcely found in any other collection. The *Pellæas* are also well grown, and numerous; indeed it would be difficult to know where to find such another lot. Take the more familiar European *P. atropurpurea*, or the Bird's-foot *Pellæa* (*P. ornithopus*) from California as examples; here they are in good numbers and quite happy, and the same may be said of the charming *P. calomelanos*, *andromædifolia*, *densa*, the rare and very charming *Bridgesii*, *Breweri*, *geranifolia*, *intramarginalis*, and the ever graceful *ternifolia* with its pretty arching fronds, the stipes of which pass through the glaucous

pinnae, while that very scarce North American *P. Wrightiana* is quite at home, producing excellent fronds; and we must not forget a handsome variety of the old *P. rotundifolia* named *cordifolia*. The pinnae are oblong, cordate at the base, and well developed plants are most attractive.

A house is devoted to filmy Ferns, and here in the greatest luxuriance are the *Todeas*, excellent specimens of *superba*, *Fraseri*, and *pellucida*—the latter extremely beautiful. Several species of *Trichomanes* and *Hymenophyllum* are in excellent condition; the Killarney Fern is charming, especially the variety *dissectum*. The curious and pretty *T. reniforme* is also well grown, also the rare little *T. Petersii* of Carolina, and *auriculatum*, *crispum*, *venosum*, and *Luschnathianum*. Among the *Hymenophyllums*, *demissum*, *flexuosum*, *pulcherrimum*, *Tunbridgense*, &c., a frame of the latter planted out outside is in admirable condition, also frames of *Todeas*, which were out during the winter and subjected to frost, which, however, had no prejudicial effect upon them.

Davallias are largely grown, and one met with many good things. The useful *D. fijiensis* is largely grown, but as a decorative species this is superseded by its variety *plumosa*, which produces larger, broader, and more copiously divided fronds, and is in every way a more vigorous grower. One very distinctive characteristic Mr. J. Birkenhead pointed out was the peculiar disposition of the very scaly rhizomes to grow perpendicularly, or nearly so, and not prostrate, as in the normal form, hence good plants are attached to portions of stems. *D. Kunzei* and *D. solida* are also well grown on blocks of cork fastened with copper wire. The rare little *D. parvula* and *D. heterophylla* are also very happy, as well as *D. hirsuta*, *D. chaerophylla*, and *D. bullata*. *D. Mooreana* is largely grown in all stages.

Space will not permit me to specialise any other genera, but some other varieties can scarcely be passed over without notice, and first there is the distinct and beautiful little *Aspidium mohrioides*—a veritable little gem, a picture even of Fern greenery, with its deep green oblong lanceolate fronds with densely imbricated segments, coming to us from Patagonia and the Cordilleras of Chili, and which is a cool house or case Fern *par excellence*. While with the Shield Ferns I may mention an Indian form of *A. falcatum*, approaching, but quite distinct from, *A. caryotideum*; the pinnae are broader across the base, the terminal one especially, and more deeply lobed; the apices of the lobes and lateral pinnae are elongated almost caudate—it is a most effective kind, but not yet offered for sale. *Lastrea Richardsii multifida* is a very effective Fern and grown in quantity. *Polypodium glaucophyllum* is a very handsome species, the back surface of the fronds being very glaucous. A most striking Fern exists under the name of *Pleopeltis fossa*, producing very variable fronds, some simple, others sparingly lobed, while others are freely lobed, the plants presenting a very distinct appearance. *P. pictus* is very handsome, and the rare little *Drymoglossum piloselloides* is very happy grown on blocks. *Gymnogramma Wettanalliana* is very pretty, and abundantly grown; and we saw the handsome *decomposita* and the silvery *peruviana* in the best condition. *Sadleria cyatheoides* and *pallida* are both rare small Tree Ferns. *Denstædtia davallioides Youngi* is a very handsome large growing variety, admirably adapted for the embellishment of a large rockery. *Doryopteris sagittifolia alcyonis* is a very distinct and striking Fern, the fronds being curiously divided. *A. Nephrodium*, under the name of *N. molle Sangwelli*, is, we believe, quite new, even to literature—it certainly has some affinity to *molle*, but the fronds are broadly deltoid, and superficially the plant is quite distinct from *molle*; a large number of *molle corymbiferum* are grown, a very handsome Fern reproducing itself from spores. One is always reminded of a trite saying, which is accredited to Mr. Baker when first examining this form, “Dear me!—*molle* is gone mad!”

HARDY FERNS.—These are mainly grown in a branch nursery, but one's time was far too short, and nothing more than a cursory glance was enjoyed, but sufficient to know the collection is very rich, composed of thousands of the best varieties, including the North American *Osmundas*, in grand condition, *Struthiopteris germanica*, broad masses of the Oak Fern, in the happiest luxuriance, the Beech and Parsley are also strongly represented. Almost countless are the forms of the Lady Fern, *Scolopendrium*, *Polystichum*, *Lastræa*, and *Polypodium*. Several houses and frames are crowded with them, while broad quarters are planted out beneath small trees. Indeed this as well as the other nursery is a real Fern world, where countless differentiations are to be seen and admired. But I must leave and draw this imperfect sketch of one of the richest collections of Ferns to a close, by strongly urging all Fern lovers to avail themselves of the treat afforded at Sale; it feeds the most finely strung enthusiasm, a treat greatly enhanced by the hospitality of the Messrs. Birkenhead. I may mention a curious instance of Ivy growth to which my attention was drawn by Mr. William Birkenhead; a strong shoot found its way from the outside, through the wall, into the sitting-room, where it was encouraged, and has made excellent growth, being trained inside the window. If memory serves well I think it has been inside two years. By what method of growth was the shoot thus forced through the wall? Why did it leave the air and sunshine?—*Pteris*.

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"The JOURNAL of HORTICULTURE."

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NOTES AT MANCHESTER.

THE Whitsuntide Show at Manchester has gained a great fame throughout this country, and in consequence many horticulturists pay an annual visit to the great Cotton City, with the object either of contributing some of their productions or to inspect and criticise those of other members of the craft. * * * * *

MESSRS. W. & J. BIRKENHEAD'S FERNS.

The charming group of Ferns from this firm was one of the features of the Exhibition, a most tasteful combination of elegant foliage and varied shades of green. Examples of this style of grouping plants have for several years been prominent at Brighton and Eastbourne Shows, where classes are specially provided for them; but the idea does not appear to have extended beyond these Societies. Messrs. Birkenhead therefore set a bold example in entering the class for a general group of plants with one composed exclusively of Ferns. It was, however, so greatly admired that it is to be hoped that some special encouragement will be given to this form of grouping.

A large number of species and varieties were represented in the group, but to gain an accurate idea of Messrs. Birkenhead's stock a visit must be paid to their Fern Nursery at Sale. There the fern-lover will find ample to interest him, for some seventeen or eighteen houses are devoted to these graceful plants, forming probably the largest collection of Ferns in cultivation. All the best-known and generally useful species of both hardy and exotic Ferns are grown in thousands, and a glance at the house of sporelings ready for potting occasions a feeling of wonderment as to where they will all find homes. There certainly appears to be enough to stock the entire country, yet Messrs. Birkenhead occasionally find it difficult to meet the demand for some particular species. At this time of the year, when the majority of the plants are making fresh growth, their appearance is especially beautiful, their bright green elegant fronds rendering the houses very attractive. In every department the Ferns are distinguished by a robust healthiness that is most refreshing, and there is an absence of that drawn flaccid flimsiness which too often characterises Ferns in private gardens. One cause of this greater sturdiness is the practice of exposing the plants freely to light without going to the extent of permitting the young tender fronds to be injured by a bright sun. What might be termed the "dark" system of culture has too long been followed with Ferns, and the result is that in many establishments plants may be seen dragging out a miserable existence, unsatisfactory alike to gardener and employer. There is, however, a gradual awakening to the fact that Ferns, like other plants, do not under cultivation require to be perpetually in a state of semi-darkness, and with better houses, stages, or shelves nearer the glass, and more liberal ventilation in suitable weather, the plants are more likely to develop their true beauty and proportions. Another matter which has been fully proved in the Sale Fern nursery is that peat is by no means so necessary for Ferns as has been so long supposed, better and more substantial growth being obtained from Ferns in a compost of good loam and leaf soil than from the best peat obtainable. Indeed, there are some Ferns, and amongst them may be mentioned the *Scolopendriums*, which thrive best in a rather heavy loam. The supply of moisture is of great importance, and the soil in which a Fern is growing should never be allowed to become dry. At the same time Messrs. Birkenhead and many other growers find that syringing Fern fronds is to a large extent better avoided; in many cases it is of doubtful benefit, and in some it is positively injurious. Preserve the requisite amount of moisture in the air by damping paths and stages, but beyond an occasional sprinkling to keep the fronds fresh and clean do not syringe them. Such in brief is their practice, and the proof of its suitableness is apparent in the condition of the plants.

To enumerate only the best of the species and varieties composing the Sale collection would fill a volume; all the leading genera are strongly represented, and there are some varieties which it would be difficult to find in any garden in England. Those little gems the *Cheilanthes*, *Nothochlænas*, and *Pellæas* are especially numerous, and succeed most satisfactorily on a shelf close to the glass in a lean-to house. These charming little plants are reputedly difficult to grow, but there they appear quite at home, producing their graceful prettily powdered fronds most freely. They are seldom seen in gardens, chiefly no doubt because there is an impression that they will not succeed; but those who have seen the Sale collection will be inclined to alter any unfavourable opinion they might have formed. There the plants grow freely, unfurling their charmingly graceful fronds, and soon forming on the shelf devoted to them quite a thicket of growth. An especial favourite is the so-called Lace Fern, *Cheilanthes elegans*, with its finely divided fronds, which needs a rather warmer position than most of the other species, such as *C. Clevelandi*, *C. Fendleri*, *C. frigida*, *C. myriophylla*, and *C. vestita*, which succeed best in an ordinary cool Fern house. The *Nothochlænas* are similarly divisible into two classes, the warmer section including *N. chrysophylla*, *N. nivea*, *N. rufa*, and *N. sinuata*; while in the cooler group we have *N. canariensis*, *N. candida*, and *N. lanuginosa*, all pretty species, but little known.

In every house there are numberless attractions—*Adiantums* and *Aspleniums* in abundance, with scores of varieties over which a Fern-lover would go into ecstasies. In addition to the usual tropical Ferns there is a good collection of the best "Filmies," which, like all the others, are in a most satisfactory condition. The hardy Ferns are grown in hundreds of thousands, and more vigorous specimens I have never seen in cultivation. The beautiful little Beech and Oak Ferns, everyone's favourites, are very strongly represented; while the most distinct and handsome of the varieties of British Ferns are grown in abundance. Throughout, the collection is most interesting, and no horticulturist should visit Manchester without spending an hour or two at Sale.—LEWIS CASTLE.

Temple Gardens, London, R.H.S. Show.

WHAT THE HORTICULTURAL AND OTHER PAPERS SAY.

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“THE GARDENER'S CHRONICLE,” May 31st, says—

“Messrs. W. & J. BIRKENHEAD exhibited in that excellent manner peculiar to the firm whenever we are favoured with their presence in London. They staged some 500 specimens, embracing a fair representation of each class and also of Ferns generally. The group was arranged in sections as much as possible—the *Adiantums* together, the *Aspleniums*, *Gymnogrammas*, and other large genera placed conveniently for comparison; the exotic species together and the hardy kinds at the end. Among the hardy we noted the elegant *Athyrium* f.f. *plumosum elegans*, and *A. f.f. Frizelliae cristatum nanum*, *Lastrea* f.m. *fimbriata cristata*, elegantly fringed and crested; the *Scolopendriums cristulatum* and *grandiceps* were remarkable, and the well known but pretty *Asplenium septentrionale* and *A. Germanicum* were among the dwarfest. Among the exotics were a group of all the species of *Lygodium*, and the allied *Lygodictyon Fosterii*; a fine lot of *Oheilanthes* and *Nothoclœnas*, some of the rare *Onychium auratum*, *Lomaria fluviatilis*, *Davallia parvula*, and a group of Filmy Ferns, including the new *Todea grandipinnula*.”

“THE GARDENER'S MAGAZINE,” May 31st, says—

“Messrs. BIRKENHEAD, of Sale, near Manchester, presented a wondrous collection of Ferns.”

“Messrs. BIRKENHEAD contributed a thoroughly representative collection, comprising good examples of all the finest of the British and exotic species and varieties.”

“AMATEUR GARDENING” says—

“The Ferns shown by Messrs. W. & J. BIRKENHEAD, to the extent of five hundred kinds, were, it is needless to say, of great interest. The collection embraced almost every type of Ferns in commerce.”

“THE GARDEN” says—

“*Gymnogrammas* were exhibited at the Temple Show in great beauty, by Messrs. BIRKENHEAD. The best amongst the varieties is the form *G. schizophylla gloriosa*. There were also good examples of the Silver Fern (*G. Peruviana argyrophylla*). This is a very beautiful plant, having a thick coat of silvery powder on both sides. A plant of *Platyserium Willinckii* was shown in very good form by Messrs. BIRKENHEAD.”

“THE TIMES,” May 30th, says—

“In one of the tents were the Filmy Ferns, rarely or never seen before in such beauty and variety at a Flower Show. With little pearls of dew gemming every point of the cool green fronds, they were most agreeable to look upon, and it was difficult to believe that, even with the protection of glass shades, these natives of caves and of tropical forests could be exposed without danger in a canvas tent. The Killarney Fern and that which is found among the rocks of Tunbridge Wells, with a doubtful variant called Wilson's, are believed to be the sole indigenous examples of this class, and they were all represented yesterday either in Mr. Backhouse's or Mr. BIRKENHEAD's collection. Mr. BIRKENHEAD, of Sale, whose Ferns were not selected exclusively from the filmies, showed a new *Todea grandipinnula*, a feathery hybrid, and the garden variety *Davallia tenuifolia Veitchiana*, very light and wavy. There was also a *Gymnogramma schizophylla* originally from Jamaica, but in its improved form called *gloriosa*. A first-class certificate was awarded for *Lastrea* f.m. *cristata fimbriata*, crested and fringed with delicate embroidery of vegetable green.”

“THE MANCHESTER GUARDIAN,” May 29th, says—

“On the whole the show was a brilliant one, but it is impossible to give here more than a few of the more prominent exhibits. Messrs. W. & J. BIRKENHEAD, of Sale, Manchester, sent a beautiful collection of rare Ferns. Their *Davallias* were particularly admired. Most deservedly they obtained the Silver Cup for the best collection of Ferns.”

“THE NEW YORK HERALD,” May 29th, says—

“In Ferns there were numerous exhibits, the most extensive array coming from Messrs. W. & J. BIRKENHEAD (Sale, near Manchester), and containing 500 varieties, a Silver Cup being the award made, in addition to a first-class certificate for a new variety (*Lastrea* f.m. *cristata fimbriata*).”

COLOURED PLATES OF FERNS.

WE have secured a large number of beautiful Coloured Plates of Ferns, originally produced for

LOWE'S "EXOTIC and BRITISH FERNS," Published at £9 9s.

These Plates are executed in an excellent manner, the illustrations being so life-like that anyone might easily think they were actual Fern fronds laid on the paper.

Fern lovers have thus an opportunity of securing specimens of any or all of these exceedingly valuable and interesting Plates so long as unsold. When the stock is exhausted there will be no further possibility of obtaining such faithful representations of the originals, as to reproduce them would cost a very large sum. We therefore advise all lovers of these plants to procure such plates as they wish for without delay, as our stock of some kinds is very small. A list of those in supply will be forwarded on application.

The Plates are not only interesting as representing particular Ferns, but useful for reference, and may be kept either loose or arranged in book form in albums. Many species, not now procurable as living plants, are represented, and the plates of such are specially valuable.

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From "THE GARDEN," Feb. 14th, 1891.

—:O:—

A BEAUTIFUL FERNERY.

"The illustration appearing herewith represents a view in a fernery belonging to Mr. J. Halliwell, Laburnum House, Bury, Lancashire. On passing through the doorway of this fernery a scene presents itself which at once in imagination transfers the beholder to a lovely tropical district, such as is sometimes described by travellers who have seen Ferns revelling in their native homes.



View in the Fernery of Mr. HALLIWELL,
Laburnum House, Bury, Lancashire.

Engraved for "THE GARDEN" from a photograph
sent by Messrs. W. and J. BIRKENHEAD, Sale.

"Entering the fernery, one looks upon a mass of sandstone rising tier above tier. From interstices and also from capacious pockets hang in graceful profusion lovely fronds of innumerable species and varieties of varied form and colour. The pathway winds in and out, gradually sinking lower and lower, while the rockwork rising on each side gives the appearance of the path having been hewn out of solid stone; here a mass projecting, there receding and forming large receptacles in which the Ferns grow in wonderful health and vigour. Passing along this rocky footpath, at the extreme end, a very attractive feature is a stream of water which, after running along a rocky channel for a short distance, comes tumbling and dashing over the rocks obstructing its course. Three parts of the way down, a miniature lake is formed, from which the water again escapes and falls into a deeper and larger receptacle, which, judging by appearances, the water might have made by its incessant fall and flow during past ages; going a little further the stream disappears, like some underground river, to appear in a different place and be put to further use. Turning and looking towards the now invisible entrance, completely blocked from view by a large projecting

Fern-clad rock, the prospect is very beautiful. One very striking thing is the perfectly natural appearance presented by the luxuriant growth of the various Ferns, Selaginellas, and other plants; *Adiantums*, large and small-leaved, growing in masses in the large pockets, and peeping out of crannies and crevices; *Davallias* creeping here and there over and up the rocks, showing their peculiar brown and white feet; *Aspleniums* in abundance, some large and spreading, bearing numbers of young plants, others finely divided and cut; the noble Tree-fern (*Alsophila excelsa*), *Microlepia platyphylla*, a rare species, but a splendid object; Gold and Silver Ferns; the lovely *Gymnogramma schizophylla gloriosa*, with its gracefully-curved, finely-cut fronds, a picture of beauty; the Stag's-horn Ferns, the lace-like *Cheilanthes elegans*, with others of this genus; and *Pterises* without number. Every step that is taken brings to view species and varieties rare and beautiful, and seldom seen in private collections.

"One exceedingly beautiful Fern will be noticed in the illustration, hanging gracefully over the rock, viz., *Adiantum concinnum*. This is indeed a lovely plant, such as is seldom seen. There is an absence here of the arches which so often appear in various fantastic designs in ferneries, and which very frequently spoil the effect, producing an unnatural appearance. In this fernery, while there is not the slightest trace of formality, the rockwork is so arranged that the Ferns and other plants growing at the bottom on the level of the footpath get an abundance of light. When the light is obscured by arches or by overhanging rocks injudiciously placed, the plants below them, which ought to be as healthy and in as good condition, or better than anywhere else because more in view, are weak and drawn, and detract from instead of add to the appearance of the fernery. The requirements of plants in the matter of light should always be provided for, and in Mr. Halliwell's Fern paradise they show a healthy vigorous condition, as a result of this and other natural surroundings and provisions.

"In addition to the Ferns there are many Selaginellas planted, some upright in growth, others forming tiny carpets of green, golden, or silver verdure. *S. cæsia arborea*, with its rambling stems and branches and beautiful metallic blue foliage, might be in some tropical forest, it is so thoroughly at home. *Ficus repens* and *F. minima* creep up the stones, hang over the rocks, and spread in all directions. *Tradescantias* and a few other suitable plants give additional variety in form and colour, and altogether serve to make up a scene of beauty.

"This fernery was constructed and planted by Messrs. W. and J. Birkenhead, of the Fern Nursery, Sale."

N.B.—The Fernery to which reference is here made, and Illustration of which is given, is one out of many which may be seen by the kindness of the gentlemen for whom we have constructed them. We shall have pleasure in giving addresses at which they may be seen, on application.

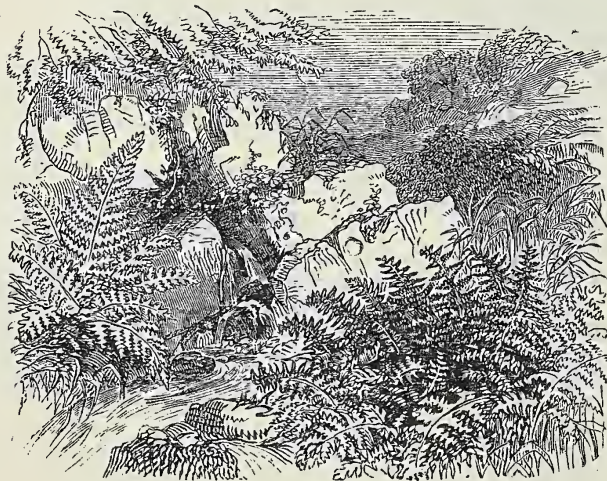


ROCKWORK.

—:O:—



FERNERY.



A NATURAL FERNERY.

HAVING given special attention to the requirements of Ferns and other Plants in Rockwork Ferneries, and having had much experience in the construction of Rockwork, both in and out of doors, we are well qualified, and always make it our special aim to build, arrange, and plant Ferneries so as to be of an ornamental character, and as near an approach to nature as possible. We shall be pleased to undertake the construction of outdoor or indoor Ferneries or Rockwork, on large or small scale, and supply the various materials required for the purpose.



A FERNERY.

We are indebted to the Publishers of *Garden Work* for the block by which this illustration is produced.

